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THE TRANSPORTATION OF CONSUMPTIVES UPON RAILWAYS IN PULLMAN AND CHAIR CARS—A SUGGESTION.

There can be no doubt that the constant extension of tuberculous troubles arises from ignorance and utter indifference to the dangers of an infectious disease, an ignoring of all laws pertaining to hygiene and sanitation. And nowhere is this more manifest than in the transportation of persons upon the ordinary railway train. In certain months of the year the chair cars and the Pullman cars are absolute abodes of unhygienic and unsanitary conditions. Any one who has ever traveled in them knows that ventilation is an unknown thing within them. They possess the most powerful of heating apparatus and fitful ventilation; a stratum of superheated air strikes one who enters them just about in the vicinity of the face and almost suffocates. The forces at work seem to confine this stratum of superheated air midway between the car's roof and the car's floor. It indeed seems to be hot enough to germinate anything at a very rapid rate, and we believe that generally it is a most complete culture medium for the rapid propagation of an infectious trouble. Mixed in these cars of poor ventilation is the consumptive and person troubled with other infective ailments. Disease has free and unlimited sway, and we believe that if the history of many cases of tuberculosis could be traced, that the reeking air of a Pullman or a chair car could be shown as being their cause.

We believe that it is criminal at this stage of our civilization to permit the free and unnecessary communication of the consumptive and the healthy, as shown in their transportation upon the railway. And it is demonstrable that it is the engendering of conditions which lead to the rapid propagation of such troubles. It can be easily shown that in these

superheated cars there is a stratum of superheated and perfectly dormant air within them, and that this stratum meets all the indications of a culture bed for the rapid propagation of some forms of microbic life. There is no field where greater and more efficient means can be employed to destroy these unsanitary and unhygienic conditions than upon the railway. We maintain that boards of health ought to insist that railways meet them and strive to lessen the extension of such a death-dealing trouble as consumption. Consumptives ought to be made to travel in separate cars and not be mixed indiscriminately and recklessly with the healthy. The present compartment sleeper can be made luxuriously comfortable and at the same time perfectly sanitary. The compartments in these cars need not have an absorbable material within them; their walls, ceilings and sides can be made of non-absorbable material and susceptible to the most perfect ease and completeness of aseptic and antiseptic cleanliness. Individual sputa cups for each compartment and trained porters, trained and educated to the purpose of rapid destruction of sputa and obedient duty, are two essential preventive measures. It is fair to assume that should any railway strive to carry out such measures, they would not only meet the commendation of the intelligent community, but the praise and patronage of all intelligent physicians and persons. In this there is no infliction of injury, or any inconvenience or discomfort upon any one suffering from tuberculosis, but an absolute benefaction, where every element conducive to their bettering in rest, comfort, and soothing surroundings can be met. The present chair car upon a railway is a barbarous device. There is ordinarily in winter months in one of these crowded affairs, enough healthy air to meet the full-fledged function of a cat. They, the travelers, are crowded in a very small money-making space, to the utter abrogation of any law of health and well-being, and often become rolling affairs of infection.

MENTAL OVERSTRAIN AND DEATH.

The recent death of former Governor Flower, of New York, has again enabled the lay press to prove the inevitable penalties of mental overwork. They descant upon the number of prominent and influential men who have been already stricken down in the full tide of their usefulness. They pass wise remarks concerning the appalling evidences of the great and ruinous wear and tear attending the usual struggles for success in the many lines of human endeavor. How a mistaken ambition makes them strive to prove how much can be done within a given time, thus meeting the overwhelmingly self-imposed duties of life, thereby being culpably thoughtless of the demands of a future. How the present methods of business is naught else than a horrible crowding process. That it simply means the getting the most light from our burners without calculating the deep, essential and vital expenditure. That there are thousands of men who are following—yes, unconsciously following—the pernicious example of Governor Flower, and that their taking off is a mere matter of time, only a postponing of a retribution from outrages against nature and against moderation and rest. Each and every one of those who are indulging in mental overstrain believe that they are exceptions to natural laws. Their misapplied pluck and stubborn thoughtlessness are a dangerous offset against reserved energies and common sense. Thus thinking, these men

will make one more fatal endeavor and go to the extreme limits of intensity; then the mischief is done, and then the break-down comes with startling effect and suddenness. Americans live too fast, they work too intemperately, they work too hard, and they have not sense to know it. We know of no sadder picture in life than such men when in the midst of the most serious of vital changes, with strained brain, a gradual wasting of resistance, an insidious approach of a most terrible and inevitable culmination of their intemperance. Their constant abuse of every law of nature seems to beget within them—yes, within their fated and benighted brain—a most delusive conception, and that is that they are individually superior to nature. 'Tis such men who must inevitably meet the penalty of brain-strain and overwork. Like Governor Flower, they are surely to be stricken down in the full tide of their usefulness. It has appeared to the writer that many men in executive positions having conquered so many difficulties, and having obtained so many results, that there is undoubtedly created within their souls a conscious feeling, a delusive conception of their superiority to ordinary surroundings; and there comes a stubborn egoism as regards nature and all else. Yes, they have conquered by hard work whatever they have attempted. They have attained results in many respects remarkable, and from flattery they thus become absolutely deluded and egoistical creatures. There dwells within them an innate feeling of delusive superiority; they defy the inherent capacity of their own brains—yes, they defy their God-made nature, to inevitably end their lives, or become palsied, shattered neurasthenics. The histories of many men who have managed large corporations, and who have grown up from the humbler walks of life, have made them become thoroughly self-reliant, arrogant, and egoistic; and they are utterly incompetent to receive safe, sensible, and worthy advice. They become as thoroughly deluded as any lunatic, and in their extreme vanity they imagine themselves incompetent of failure. Such stubborn, vain, and headstrong creatures have no prospect of any other fate than to become certainly a mental wreck or end their existence.

The writer of this editorial has met more than one powered egomaniac who had accomplished wonderful results in organizing, wonderful results in management, and accomplished wonderful financial feats. Their very talk is deeply pervaded with the fixed idea of the lunatic; they have accomplished potent results, and they have accomplished these results amidst difficulties, unaided and unadvised. And as their brains become deep-rutted in conviction they delusively imagine that any judgment counter to their own is of no value—in brief, they have become the vain, fanatic, ego-maniacs of result. Intense, stubborn, arrogant, and dogged, in their self-made mental condition, they will not receive advice, and defy all laws of nature, only to surely meet a just punishment for their delusive defiance.

Again, we have among us many men of rare accomplishments and promise, who become pure psychic creatures—creatures of one-sided function who rarely if ever exercise their muscular system, but exercise their brain inordinately. It is a God-made edict that men must live by the sweat of their brow; and that man who lives only to exercise his brain, lives a disorderly life, and in an established disequilibrium must meet the fated result of such condition. Exercise—muscular exercise, in the truest sense

of the word—exercise by the sweat of the brow, by the sweat of every inch of skin surface—is necessary to maintain health. Men of cerebral tension must, above all others, use their muscles to relieve the pressure of arterial tension on their hearts and brains. Certain it is that there are very few prominent workers, or managers of large financial interests or corporations, who know the law of health, as exemplified in proper mental and muscular exercise. Perhaps there may come in the future some strong and forcible character to teach such men how to live, but at present there certainly seems to be no one who can reach them.

THE INTERNATIONAL TUBERCULOSIS CONGRESS—THEIR PLANNING OF SANATORIA.

Not the least accomplished in the meeting of the International Tuberculosis Congress was the discussion and planning of sanatoria for the treatment of the tuberculous, particularly the formation of those sanatoria for the treatment of the middle and poorer classes. In the discussion concerning the best system of their formation, the best mode of their construction and the results obtained, much new and valuable information was imparted.

The situation of the sanatoria should be sheltered and sunny with a wooded neighborhood without dust, smoke or soot. There should be a good and plentiful water supply and a good system of drainage. The height of the building should not exceed two stories above the ground floor. The kitchen should be placed in a separate part of the building and the wash-house in a building of its own. Bedrooms should not be used as living rooms. The minimum of air space should be thirty ccm. per bed. Single rooms should be provided for ten per cent. of the inmates. The baths should not be in the cellar, but in warm, dry rooms. The walls, floors and ceilings should be faced with impervious material easy to clean. The central heating electric lighting tubs with pure water should be provided, as well as arrangements for getting rid of sputum and for sanitary infecting clothes before being sent to the laundry; and that a people's sanatorium should be for one sex and for one class only. The results of these sanatoria have indeed been excellent, and the future promises a great deal more.

Staff Surgeon Schulzen, of Berlin, who discussed the arrangement of sanatoria, advocates the pavilion system. In summer Doecker's movable barracks were useful for extension. The bedrooms should contain from two to four beds, but a small number of single rooms should be provided. Meals should be taken in common under the supervision of nurses. The nurses should be educated ladies. The results obtained in sanatoria so far were good, but the time had been too short to permit a final opinion to be formed. Continuing, Schulzen says the results would be improved (1) by the more careful selection of patients and exclusion of those in a late stage; (2) by extending the duration of the treatment; (3) by the establishment of convalescent homes where patients could, after their discharge from these sanatoria, take up work under favorable conditions. Directors of sanatoria should remain in communication with patients after their discharge; should receive exact reports from them, etc., and should send in

results to a central office, where statistical lists would be made out. We quote from an editorial in the *British Medical Journal* upon this subject, and it is worthy of the perusal of intelligent physicians:

Though sanatoria for the treatment of poor consumptives are of comparatively recent introduction, the number of such institutions in Germany is already considerable. It was only in 1892 that the beginning was made by the establishment at Falkenstein of the first sanatorium for poor consumptives. This was a small establishment close to the celebrated sanatorium directed by Dettweiler, and has now been superseded by the neighboring large establishment at Ruppertshain, which was opened in 1895. During the last few years the progress in this direction throughout Germany has been astonishing, and more sanatoria for tuberculous patients of the working classes exist in Germany than in any other country. If we inquire as to the causes which have led to this praiseworthy result, two principal reasons are perceived: (1) The good results obtained by the private sanatoria for paying patients and the attention directed to the subject by the writings of Brehmer, Dettweiler and others, and (2) the German system for the compulsory insurance of the working classes.

This system of general assurance under State control was practically inaugurated in 1881, and has been gradually extended and consolidated since then. The object is to give the workman unfitted for work by sickness, accident, invalidity or old age, a legal right to a provision sufficient to render him independent of public charity or poor-law relief. The practicability of this colossal scheme has been abundantly proved by its successful working under the paternal government of Germany. The results of the system are, from a medical point of view, already very great. The possible relationship between traumatism and various diseases has been more exactly studied than previously, and the most reliable methods of dealing with workmen's injuries (so as to accelerate recovery or minimize resulting disablement) have been investigated on a larger scale than was formerly possible.

The necessary funds for this system of assurance are furnished partly by the employed themselves, partly by the employers, and partly by the State, so that all parties have a common economic interest in maintaining the welfare of the working classes, both by making the conditions of their lives as hygienic as possible, and by affording them the best possible treatment when injured or diseased. For insurance against accidents the chief contribution is furnished by the employers, who likewise subscribe a sum for insurance against illness equal to half the amount paid by the workmen themselves. It is therefore in the employers' interest not only to guard their workmen against accidents of all kinds, but by proper ventilation of the workrooms, and by every other rational method, to diminish their liability to consumption and other diseases. The medical and surgical treatment is provided by local associations, which receive the contributions from the workmen and their employers.

Foremost amongst the questions which these associations have to decide is, what to do with their members who become consumptive. Considering the relative frequency and the chronicity of pulmonary tuberculosis, provision for consumptive members must seriously drain the resources of any workman's assurance association, and from the economic as well as from the humanitarian point of view, the best method of treating the disease has to be selected. It is said that about a quarter or more of those who die of pulmonary tuberculosis might be saved by timely treatment according to the methods in use in modern sanatoria. It is reasonable, therefore, that sanatoria for poor consumptives should receive very strong support from the various workmen's insurance associations. Although private philanthropy must always be useful in Germany, as elsewhere, for the foundation and maintenance of such sanatoria, yet assurance associations naturally contribute to the expenses of these institutions in proportion to the number of patients they send for treatment. Gebhard calculates that if an assurance association provide sanatorium treatment for five hundred consumptive workmen, the cost of treatment will be counterbalanced by the result, provided that one hundred and forty of the patients so far recover as to do without sick pay for a year.

THE STATE BOARD OF HEALTH OF MISSOURI.

The editor of this journal has an abiding faith that the time will come when legislators, congressmen and senators will be compelled by wise legislative measures to look after the health of the masses with as much concern as they now look after their own petty ambitions and party measures. For as time will come and go it will be only too plainly shown that their utter ignoring the welfare and disease-producing elements and death-dealing factors of the poor, the weak and the ignorant is a constant menace to all forms of society, its rich and powerful, as well as its poor and needy. The fact that from twenty to thirty per cent. of all mankind die from some form of tuberculosis, the fact that in some countries one out of every five has syphilis, the fact that cancer is increasing and epidemic troubles deplete countries, comes from the still greater fact that men in ignoring the diseases of the helpless, weak and needy, only surely makes the extension of these troubles possible and inevitable. It is only in the perfection of altruistic endeavor that can come the best and most protective measures for the health of all forms of society. Where consumption and syphilis exist most largely among the poor of any community it is only the surer and only the most absolutely certain that the rich will be affected; wealth may separate society, but passions bind them together in no uncertain embrace. Yes, any community will thrive best in health who will take care of the needy. Any community which has all of its individual components selfish will plainly show in time absolute failure. Man now, in his eager search for wealth, has arrived at the zenith of his selfishness; hence we have a world welling in misery and a constantly increasing field of death-dealing disease. It is a sad thing to say, but it is our honest belief that, in proportion to the intelligence of the American nation, it is the weakest on earth in self-protective, altruistic endeavor. At the very center of our government we have no such thing as a protective health organization, it is only rude and death-dealing conditions which meet anything like efficient consideration. Our government is a true reflex of the governed, and its altruism is a weak, sickly and spasmodic thing; the life of one man is to it like a fly-speck in the center of the sun. We are thankful that every day it is becoming more evident that the ignoring of our poorer classes and their diseases makes a ponderous power for inflicting death and disease upon every walk and position in life, and that the most efficient government is the one which looks after the best interests of all of its citizens. The efficient endeavor, amidst many adverse conditions, of some of our metropolitan boards of health make manifest the working of a force will redound to the benefit of communities possessing, and this particularly regarding New York. There is no greater parody upon human organized health protective measures than is shown regarding the organization of many State boards of health. The State Board of Health of Missouri is a parody of the most pronounced sort. We do not wish to be understood as speaking concerning the personnel of the board, for it is composed of eager, willing, honest, and competent men, who are bound in the narrowest limits of a niggard function by a legislature whose only merit on earth consisted in its caviling upon the most nonsensical and utterly irreverent of objects. The State Board of Health of Missouri is like many other boards—it has a name, and that is all. The legislature robbed it of any purpose,

robbed it of any function, and made it a thing of travesty when it throttled it of its means of support. It has been appealed to to aid in the suppression of small-pox. The only thing on earth that this board could do was to make a diagnosis. This was excellent as far as it went, but there its function ceased, since they were not empowered to even buy a vaccine tube, or empowered to enforce a single edict. There was a time when an intelligent board was formed and gave promise to be a factor of use, but adverse forces from the doctors themselves throttled it as easily as an elephant could thrash a fly. It is a substantial fact that many boards of health have been formed for the most trivial of purposes, to regulate the practice of medicine, to make a weak medical college prosperous. In a neighboring State to Missouri this was the case. This board had a plentitude of power for examination of medical practitioners, and not a cent or a measure to protect the health of this State's citizens. The organization of State boards of health has been, in many instances, a complete abrogation of their cause of formation to become mere regulators of the entry of men to practice medicine within the confines of that or this State. A board of health must, in order to obtain respect, be true to its name and function; and if the history of many of them be studied, it will be found to present the history of the most consummate and idiotic action. The regulation of the medical practitioner is the least of their functions; the protection, study and adoption of means to render disease less frequent, to prevent the spread of ponderous infectious trouble, the lessening of pain and death, are infinitely more praiseworthy and commendable, and meet the true purpose of their formation. It is a truth, plain, evident, and sad, that none have had greater strength and more evil effect upon the real and essential purpose of a board of health than has the physician himself. Such boards are for the greatest good of all—the best form of altruism—the protection of the ignorant, diseased and needy, and not for the gratification of contemptible, puerile, and petty personal ambition. The name of board of health has now in many States engendered the most contemptuous thought. And all of this is from the fact that they have been utterly untrue to the pure purpose of their formation. For God's sake leave the medical practitioner alone, and strive to save the lives of the poor classes. Yes, make the boards of health honest, true, altruistic bodies. Not until this comes about can any board of health hope to obtain the respect and assistance that is required. The Missouri board, as men, are martyrs to the niggard conception of an idiotic body; but, unfortunately, in the past its former boards tried to regulate the practice of medicine more than they did the saving of lives, the lessening of pain, disease and death.

TUBERCULOSIS IN DOMESTIC ANIMALS.

Professor Bollinger, Munich, maintained that tuberculosis of cattle and pigs was identical in its etiology with human tuberculosis, and that the enormous prevalence of tuberculosis in cattle was a great danger to the health of the people. On the other hand, human tuberculosis played a secondary part in the production of tuberculosis in domestic animals. The infectivity of the flesh of tuberculous animals varied with the stage and the degree of the disease. Though danger to man from this source

existed, it was probably not very great, and could be obviated by a proper preparation of the meat, and abstention from the consumption of raw or uncooked meat. The great danger to man was from the consumption of milk and unsterilized milk products derived from tuberculous cows, and the consumption of such milk, uncooked, and for long periods was particularly dangerous to children and susceptible adults. An estimate of the greatness of this danger might be made by observing the frequency of tuberculosis in pigs, which was in the main due to feeding the animals on infected milk. The great prevalence of tuberculosis among children, especially in the form of glandular infection, was to be attributed to the use of infected milk. The first essential measure to prevent the prevalence of tuberculosis among domestic animals was compulsory examination of meat.

THE TUBERCULOSIS CONGRESS.

From lay press reports those reading would come to the conclusion that the Tuberculosis Congress which came to an end in Berlin after a profitable meeting was somewhat of a failure because no new means of treatment was heralded to the world. We learn that it was first suggested and promoted by the Central German Committee for the Establishment of Sanatoria for Pulmonary Diseases, and the full title of the congress was Kongress zur Bekämpfung der Tuberkuloseals Volks-krankheit, but such was the interest manifested that it soon became an international affair, and as such has rendered great benefit in the wonderfully intelligent manner in which all subjects which came before it were discussed. Not the least interesting discussion before that body was the views concerning infection. Virchow, by all odds, was the central figure in this congress. As time comes and goes, we cannot help admiring more and more this man. He never appears to get old, but remains vigorous, useful and progressive; an inordinate, practical worker; one of the finest figures in all Germany; and to our conception, including Bismarck and Alt, his equal has not been produced in Germany. His has been the mind to mould, guide and direct the most progressive era in medicine and to unflaggingly work in the best interest of progress. He is a grand figure of effective use, high purpose, and remarkable accomplishment. Hence, his utterances at the recent congress, because of his ability and honesty, possessed peculiar value to the world at large. He thinks that the danger of infection through fowls has been overestimated. On the other hand, the milk of a tuberculous cow is a constant and increasing danger, and that there should be, at no time, any delay in killing infected animals. He does not believe in the entire efficacy of the process of sterilizing milk by boiling, but readily admits it may reduce the danger in its use. The infection from swine, though not as great as from cattle, is undoubtedly serious and deserving of prompt and special attention. The germs of tuberculosis have a habit of congregating only in certain parts of the body. In the hog they appear to assemble in lymphatic gland of neck. With skill these parts can be removed, and with them the risk of infection. In cattle the germs are localized, and if care and intelligence are exercised in the slaughter-house the flesh of an infected animal, cow, calf, or ox can be sold with propriety. Here is a new business with tuberculous butchery.

Virchow's opinion regarding the value of the tuberculin test for suspected cattle was that it is "almost infallible," and believes that no animals which are not subjected to this test should be admitted to any country from abroad. Doctor Breeger, of the Bacteriological Laboratory of Berlin, is a more ardent advocate of this measure than Virchow; he additionally believes that there is a positive curative value in tuberculin; he indicates that its worth has limitations; hence, it is not an infallible remedy. But there was no justification to the pessimistic reaction that followed the first premature announcement of Koch's discovery. The persistent use of tuberculin, he says, will show a distinct healing influence. There are certain advanced stages of consumption known as secondary infection, and it has been customary to regard them as hopeless. Here Doctor Breeger avers that help has been rendered by tuberculin even when secondary infection has set in. Some allowances will be made by the outside world for the close relations that exist between this bacteriologist and Doctor Koch, but his utterances on this subject are entitled to consideration and heed. Doctor Breeger is convinced that all failures are due to bad management or inaccurate understanding of cases. Tuberculin will certainly aid in the detection of influenza, but it is so specific in its character that it will not reveal many allied complaints. Its value is mainly in tuberculosis. Many of the failures that have been reported are due to the use of too small a dose; the patient, already in an advanced stage of the disease, having a large quantity of natural tuberculin in his system, and thus failing to respond to a small addition. He (Doctor Breeger) admits that accidents have resulted from the use of large doses, but he says that these might have been avoided with due and proper precaution. He further averred that the experience of the Koch Institute in Berlin carried out most fully the views herein expressed.

A NEW SPECIALTY NEEDED WITH A NEW NAME.

It no doubt has been suggested to many that a specialty devoted to the study and consideration of the diseases of old age alone might be worthy of a place among the great army of specialists; and we believe that a worthy, industrious and conscientious student could make an unusually efficient person, and a very useful factor in the medical field, who would take up the study of diseases of old age. He will come sooner or later, and when he does come there is a name already made for him. In a recent number of the *Academy* we find the following: "I would think that in these days of humanity and old age pension the word 'gerocomy,' meaning the science of the treatment of the aged, stands an imminent chance of being aired." Soon, then, the "gerocomist" will be a living factor.

THE DOGMA OF CONGENITAL OR INHERITED TUBERCULOSIS.

The *British Medical Journal* says: "Virchow disputed the dogma of congenital or inherited tuberculosis on the strength of his own pathological examinations. The existence of tuberculosis in unborn or new-born infants had never yet been conclusively proved. Infection took place after birth—it might be in the first days of life."

HEREDITY, IMMUNITY AND DISPOSITION IN TUBERCULOSIS.

According to Professor Loeffler, of Greifswald, congenital tuberculosis is extremely rare, and that in all such cases tuberculous disease of the mother's generative organs has been found. He does not believe that the tuberculosis of the father was any part in the heredity transmission of the disease. And as far as immunity is concerned, there is no proof as yet of immunity to the disease, nor of congenital or hereditary disposition to it, but that there is great probability that other diseases of the respiratory or digestive organs, as well as disturbances of nutrition, favored tuberculous infection.

THE MICROBE.

Ah, me! what unconscious, insidious, deathly perils do fatefully environ
That man whom teeming millions of millions of microbes do battle with!
Millions there are which thrive, millions in deep death, dark fame they dwell
Like hellish, barbarous, invading fiends sack the man—aye, sack deathly well;
They murder man by thousands, millions, unhindered and in peace and unseen;
They murder him regardless, remorseless of anything! murder him awake, asleep in dream!
They kill and kill, ever silently, surely, unceasing, kill—yes, how and when they can,
From the wee babe, the mother, the aged—aye, even the dark, stern, war-like man!
In man's mortal living heart each microbe its true death-dealing nature pursues;
Their growing millions surely make millions wound: 'tis then deathly slaughter ensues!
What groans, pained groans, fill the air in seething, martial microbic field!
How fierce a mass this microbic mass, to make this mass of man to yield!
Microbic life, hideous! yes, dire, fateful leader of earth's greatest killing power!
In birth pettiest thing of earth, monstrous fecund power, welling millions in an hour,
Hid deep in the womb of time and in man, then in lifely force to millions bound
To thrive and reek on earth in living multiplicity and shake the great world around.

CLINICAL LECTURE.

SURGICAL CLINIC ON DISEASES OF CHILDREN.[1]

By CHARLES R. L. PUTNAM, M. D., of New York City,
Instructor in Diseases of Children, New York Post-Graduate School.

CASE 1.—DOUBLE HARELIP.—This child you saw operated upon last week, and the operation has turned out to be as you see. Although the mouth is covered in and the gap gone, there remain two fistulas—one in each corner of the wound; these fistulas may need to be, at some future time, closed in. (They have since closed in perfectly.) There does not appear to have been any infection of the wound. The operation was done at one sitting. If there be a projection of the intermaxillary bone, this bone should be replaced, if possible; if not, then it should be excised. In these operations there are certain points which should always be borne in mind. It is necessary to obtain union by first intention; to accomplish this the edges of the wound must be carefully approximated, and there should be no tension in the parts. The cleft was between the central and lateral incisors and was complete on both sides.

CASE 2.—SINGLE HARELIP.—Here is a child who presents an entirely different form of harelip. The lower jaw is very poorly developed, and before the operation the intermaxillary bone projected nearly an inch in front of it. The fissures were on the left side, involving the lip, extending into the nostril, and the whole length of the intermaxillary fissure. Since the operation the constant pressure of the newly made upper lip has moulded the intermaxillary and pressed it back so much that the falling away of the lower jaw is scarcely noticeable.

By means of a pair of bone forceps properly guarded and placed in the nose the intermaxillary line on the sound side was broken; the vomer was also broken. The edges of the bones were trimmed and the parts brought together and sewn with silk-worm gut. Then a simple operation for single harelip was done. Accurate suturing of the mucous membrane is of even greater importance than the suturing of the skin, for in those unfortunate cases in which primary union does not occur, it will nearly always be found that the breaking down of the recently glued surfaces has commenced on the deep or mucous aspect of the lip. One should not forget that in fracturing the vomer and pushing back into place the portion of bone in the cleft—*i. e.*, the *os incisivum*—not unfrequently means fracturing the ethmoid, possibly at the base of the skull. When the bone has been replaced there is no doubt that the fissures in the lip can be the more readily sewed and a better appearance is produced, that the normal shape of the jaw is maintained, that the lip does not recede, and that the patient may in after life use his own incisor teeth; all this follows in those cases which have been operated upon successfully. After the operation a soft rubber catheter was placed in the nostril on the side where the cleft served as a support between the broken septum and the lateral cartilages;

[1] Delivered May 20, 1899, at the Post-Graduate Hospital, New York City.

this catheter always should be used unless the passage is clearly unimpeded, in order to prevent callus forming and creating a spur on the septum; this will not occur if such a splint be used. In this child you notice the catheter in the nose. In both these cases a blanket suture of silk-worm gut was passed from cheek to cheek and left in for three days to prevent tension of the delicate approximating sutures.

CASE 3.—CERVICAL ADENITIS.—This child presents all the features of an ordinary cervical adenitis. The majority of these cases are tubercular in character, although their origin appears to be from inflammation of the tonsils, which destroys or lessens the function of that gland as a filter. This is not a multiple adenitis, but a simple enlargement of this small group of cervical glands. There is no doubt but that at some time or other the tonsils have been more or less inflamed. In this instance it might be advisable to widely lay open the part, dissecting carefully everything out of the way and remove the glands in their entirety, bringing the parts together carefully in order to get primary union.

CASE 4.—TUBERCULAR ADENITIS.—In this case we have a tubercular adenitis involving the cervical glands, and they have broken down. The diagnosis in this case was made from the general appearance of the child. After invasion of the glands by the tubercle bacilli a fatty metamorphosis occurs, which converts the gland into a whitish, caseous material, often mingled with a thick, curdy pus. For a long time it was argued that there was no tubercle bacillus in that pus. It has frequently been demonstrated. It can also be found in the parenchyma, as can be readily ascertained by injecting the suspected material into the peritoneum of an animal—as a guinea-pig—when tubercular lesions will develop. Time and time again has it been proven that the tubercle bacilli were contained in the pus. This condition might be confounded with either a lipoma, sarcoma or syphilitic glands. In the latter, differentiation is not difficult when we remember that in acquired syphilis the involvement is multiple and discrete, and that the adinitis of congenital syphilis does not usually break down. The mass fluctuates too freely for sarcoma. The skin is not drawn in in the irregular way characteristic of subcutaneous lipoma. If possible, the removal of a tuberculous gland should be done entire, without rupture of its capsule. The great object to be kept in view is the avoidance of sinuses and the formation of ugly cicatrices, which are characteristic of long-continued suppurations. Often where tubercular suppuration exists the pus is sterile as regards other organisms.

CASE 5.—TUBERCULOSIS OF A PHALANX.—About one week ago you saw an X-ray photograph of this child's hand. Since then it has been operated upon. The affected part was cut down upon, the point of disease was gouged out with this very fine curette, made for operating upon the mastoid cells, especially that part where the epiphesis and the bone were growing; after thorough removal the parts were brought together and sewn without drainage. We now can note that the part is not particularly smaller than it was, but it has a different color. Longitudinal wrinkles can be seen, and it is no longer tense as it was, and there is now no inflammation in the bone at all. It is necessary that these cases should wear a splint for a long time to insure complete rest. The X-ray showed us that the disease was in the head of the bone, about one-sixteenth of an inch

from the joint; and it is easy to understand how readily the disease, if left alone, could have gone through into the joint. In the beginning of the disease upon section of the bone one sees a yellowish-white or pure yellow mass lying in the spongy tissue, made up of miliary tubercles, some of which have gone on to cheesy degeneration. The way this infection occurs is seen in the so-called "white swelling" of the knee-joint. This usually results from infection by the opening of a primary nodule from the bone into the joint. In the very young the femur is most often the starting point, next the tibia, and then the synovial membrane. The older the patient the greater liability is there that the synovial membrane will be the starting point, because the growth of bones become less active then. As the disease advances the articular cartilage becomes attacked, ulceration takes place, and the disease so works its way through and breaks into the joint, and so is formed a "white swelling" of the knee-joint with a tubercular synovitis. In some instances the process starts in the lower end of the femur, but not always, except in the very young. When there are early symptoms of knee trouble you should suspect the head of the tibia of being involved. In all these cases an X-ray photograph would be of great service, enabling you to find the location of the disease in the tibia, and so permit you to curette the disease at once, often with splendid results. Good results follow the rubbing of iodoform into the head of the bone; again, one may inject iodoform suspended in glycerine (ten per cent.) directly into the diseased area by means of a syringe. In operations upon long bones, as in this child, one should bear in mind the danger from hemorrhage. I have seen death occur in a perfectly healthy man from an operation for reducing a fracture complicated with a dislocation of the head of the humerus; the fracture was through the anatomical neck. On account of the amount of bone broken off and dislocated, correction of the deformity could not take place without an operation. The joint was enormously swollen. The spongy portion of the bone bled so constantly that in the course of twenty-four hours the man died; the bleeding was from the veins and oozed continually. In regard to the question of stopping bleeding from long bones, it is absolutely easy if one is prepared for it. Among a few things that might be used is a sort of wax which sculptors use for modeling; as this is poisonous it should not be used. To Victor Horsley we give credit for discovering the use of beeswax for controlling hemorrhage in bones; beeswax one part, almond oil seven parts, salicylic acid one per cent. This formula is given wrong in several textbooks, which probably accounts for the poor quality of the "antiseptic wax" often prepared. When placed in warm water the wax is made cohesive and does not shrink, and this can be pushed in and so occlude the bleeding vessel; the wax is sometimes absorbed in about a week. That it is absorbed at the end of a week has been demonstrated by opening up the scalp and incising the bones of skull and filling in with wax; at the end of a week the wax has been absorbed. One should never be afraid of bleeding from bones if they are properly prepared with this wax. If a large cavity is left in the bone after the removal of the tubercular disease, decalcified bone may be used; this is prepared in the following manner: The compact layer of a bone is used, from which all periosteum and medullary tissue is removed; divide this into longitudinal strips about one-eighth of

an inch wide and immerse in a watery solution of hydrochloric acid (ten to fifteen per cent.); this should be renewed for one or two weeks daily; then wash thoroughly in water, cut into small chips, soak two days in a 1-1000 bichloride solution and store it in a solution of iodoform in ether. Other methods are: replacing the button of bone removed; inserting catgut rolled up into a sponge; and the aseptic blood clot as proposed by Schede; the blod clot protects the edges of the wound and forms a scaffolding on which new blood vessels may form.

CASE 6.—CONGENITAL DISLOCATION OF THE HIP. For a long time nobody noticed that there was anything wrong with this boy; then his parents learned that he did not walk. You see that the limb is rotated outwards and abducted, and seems to be shrunken. Motion is perfectly free and there is no spasm of the muscles as we flex the thigh, which shows that there is no soreness in the joint; this excludes hip-joint disease and fresh dislocation of that joint. The question now is, what have we? It is not a fresh dislocation upon the dorsum, nor is it a fracture; there is no pain or tenderness. There is no history of injury at any time in the child's life. This is a congenital dislocation of the hip, and here I can feel the head of the bone perfectly well dislocated almost down to the obturator foramen. Of course, the only thing to do is to operate. This child is going to have an X-ray photograph taken, and so we can follow the case through in a more interesting manner; we have examined the child; we will soon have the X-ray, and then we will see the operation done, and later note the results obtained from the operation.

In an introduction to a discussion on the treatment of tuberculosis (*Birmingham Medical Review*, April, 1899, p. 204) Dr. Lionel Stretton remarks that "to-day the consumptive must seek salvation by living in the open air and swallowing large doses of creosote to the verge of poisoning." He thinks that fashion may drive the open-air treatment beyond the range of safety, and that it should be used only in selected cases and with proper safeguards. The use of creosote internally has not been in his hands altogether satisfactory. Large quantities, when taken, are unpleasant to the patient, who then tastes and smells nothing but creosote, and to the patient's friends, who can always recognize his proximity by the odor.

Speaking of the *prevention of consumption*, Dr. Stretton pertinently draws attention to the inefficacy of precautions to prevent the spread of tuberculosis by milk or meat if consumptive persons are employed as milkmen or butchers. He thinks that the prevalence of consumption amongst bakers may possibly sometimes infect bread. There is much in his warning against retaining consumptive domestic servants in the household, and we may add the advice to be especially careful as to the nurses who have the charge of young children.

ORIGINAL ARTICLES.

URIC ACID DIATHESIS AND ITS PARTICULAR LESIONS IN THE MOUTH.

By W. F. A. Schultz, M. D., of St. Louis.

GOUT is a disease known, if not especially recognized, by physicians many centuries ago. The first precise description of gout is attributed to Coelus Aurelianus (who lived, according to historians, in the second century). Another who explained this malady of later date was Thomas Sydenham; he himself suffered about forty years with it, and his treatise dates back to 1683, under the title "*Tractatus de podagra et hydorpe.*"

Since then many elaborate articles have been stretched forth into the profession. And much pathological investigation has been done to find the causative factor; but, as it appears, little has been demonstrated, and only few facts exhumed during the long scrutinizing and evolution perfected by the untiring pathologist. It has been known that uric acid in the tissue does mark the largest figure in its symptomatology; but how the acid is formed in such exuberant amount is the question that perplexes the many. It is not an absolute settled proposition whether the acid is increased in the blood or compounded while the elements are in the urine. Physiology teaches us "that small amount is found in the blood," and at the same breath says that the "salts present in the urine are in overproportion to the acid in the blood." This last statement would naturally allow us to think further and decide that there is salt formation occurring while in the urine. As Kirk says: "Probably the salts are formed during secretion."

The practitioner of medicine may interrogate a few questions on this problem of pathology; namely, if the acid and the salts are combined in the blood, what causes the increased amount in the somatic tissue, blood and urine? is it the increased formative process or the decreased eliminative? or, if most of the affinal alkalies unite in the urine, why is it not excreted, so it does not get back into the blood again to circulate around and deposit out in its predilective places known to us that characterize the affection, and lastly, is the superamount of uric acid and its derivative the disease or only a sign of an obscure co-existing malady? On these few interrogations hinges the whole system of treatment.

The pathology connected with this ailment that causes the deposition of urates is or does seem as perplexing to the mind as the enhanced, oxygenated and halogenated circumstances spoken of before. Strümpell likes the arbitrary classification of gout into "normal or regular gout" which affects the joints, in contra-distinction to "atypical internal gout" which attacks other parts of the body. Though he further adds, "this is an artificial distinction." What we will be contented with is the peculiar selective spot of the salts deposits, and not caring for any artificial nosological division. It is true to assert without commenting that by uric acid diathesis other and different parts of the body become tainted. When

there is an accumulation or irritation to the mucous membrane of the alimentary tract, symptoms of indigestion will arise, and the inflammation may spread to adjacent tissue and form complications, as when the urethra and the conjunctiva become inflamed. Pleurisy and pneumonia have been caused by uric acid diathesis; so also has eczema been traced to have occurred of the similar factor. During the molecular storing of the salts of uric acid in the synovial tissue, a same principle is obeyed by the deposits in other somatic tissue. It is explained by Ebstein, quoting Strümpell: "He found that the depositions of the salts are invariably preceded by necrosis of the tissue. The uric acid while still in solution acts as a chemical irritant upon the cartilage here and there, and thus produces necrosis, whereupon the urates are crystallized out and deposited. Then a secondary inflammation develops around these foci of necrosis." Now, satisfied with these preceding remarks, we will go home and apply the facts to an almost self-demonstrated truth—to the organs in the mouth, under the familiar title used by the dentists as "pyorrhœa alveolaris," where this disorder has the common cause. The theory advanced by Ebstein iterated above can admirably be adapted to the state we find in the mouth. The urates accept the predilective irritation offered by the joints of the teeth, which in syndesmology is styled "gomphosis" articulation. It would be plausible to believe with the quoted author when he says there is tissue necrobiosis before there is uratic deposits. And the truth seems plain, as we find the example calculated before us at the teeth articulation. This circumstance may ably be indorsed by the close observative stomatologic surgeon, as he contents himself after extraction of a tooth; or even where it is still held *in loco*, he discerns the peridental membrane gone and the naked root seen to some high extent in the alveolus; and in advanced cases the alveolar process that naturally surrounds the root, loose, completely exfoliated, with pockets that are deep and high which are welling out pus or sanious matter; and at a time find a uratic lithos or stone at the very apex of the root.

Uric acid salts can also be demonstrated on the sides of the fangs in this disease. The acid solution has, as is claimed, disintegrated the peridental membrane, and from this effect the tooth or teeth become loose and oscillate in their sockets. The pyorrhœa complained of in this disorder which is concomitant and pathognomonic, is undoubtedly local in feature. It is reasonable to ponder that the tissue disintegration which is apparent is not all absorbed by the absorptive process; but much is cast off and trickles along the root in making its egress from the gingival festering; as this destructive process continues, a sinus or *cul-de-sac* is framed. Again, as we now have these abnormal pouches, the result of pathogenetic change, during mastication foodstuff may lodge there and latterly set up or form pyogenesis, and finally define into an abscess.

To show this tissue distinction averred to before in this elegy is a concomitant and pathognomonic of uric acid diathesis, Da Costa (on medical diagnosis) says, speaking about gout: "There is great proneness for tartar to collect upon the teeth." The "tartar," as he pronounces it, is probably and possibly urates, as that deposit is copiously circumlaid about the neck of the teeth. Strümpell suggests that "uric acid salts are excreted by the glands where there is inflammation of these organs." This assertion may be veritable, and the salivary glands may also pour out the

salt in solution, and thereby coalesce a calculus on the teeth and gums. Pain, another prominent symptom in this malady, located in the jaw-bone, has for its construction the same as pain in the metatarsophalangeal articulation of the great toe in acute attack of gout. With these and analogies we might think there is an approximate relationship existing between gout attacking the joint of the great toe and that which predilect the gomphosis articulation in the maxillæ; and also a similar nature existing in soft tissues in different places of the organism, and that assailing the gums and periodontum.

In the way of treatment much can be alluded to, and far can be the question discussed. In regard to medicinal agencies, we are not in possession of a dogmatic or positive medicine that cures all cases. No prescription has ever been compounded that promises good results in each case; but a flying sketch in repetition of some truth, and theoretical arguments expounded by hard and laborious research, may prove available, associated with other facts. The first impediment to be surmounted is the great amount of alkali urates in the blood. Uric acid is sparingly soluble in cold water, but much more in hot water—as to the ratio, 15,000 in cold aqua to 1,800 in boiling aqua; it is very evident then what occurs in the urine—very little elimination in the pure state in solution. Physiologically the uric acid is combined as salts, and these are more soluble; if this be not the condition, there would be a heaping up in the system, as it were, but so it is expelled. According to these conclusions, the more water drank and eliminated the sooner would the salts be washed out. Hence, a diuretic with a large amount of water to drink would be one indication. Ammonium cyanate, another name for uric acid, is a dibasic acid—thus the formula $H_2C_5H_2N_4O_3$; the urates are then acid salts, as hydrogen in the molecule is not displaced by the metals or ammonia. Therefore, as we have alkali cyanate compound present in solution in the humors of the body, and as tophi deposits around the joints it cannot be easily decomposed and discharged. We are aware of the truth that the salts of lithium are the most soluble. Then here is the difficult problem in chemistry: how can the sodium and ammonium urates be split up and reformed by the alkali lithia to compose the most soluble salts? The affinity of the other alkalies is greater and always present to join in a chemical change. In theory and practicability it would seem wise to decompose the natural, common, existing salts and recompose the lithium instead.

It may be acceptable in this place to add a few remarks upon the vague and empirical practice that is being perpetrated by those misinformed. The myriad of preparations, nostrums and pleasant-smelling mineral spring waters containing lithium, recommended by manufacturers and some doctors, are very nearly as bland and inert to decompose the alkali urates as pure water from the wells or clouds, and surely more injurious for the patient.

Exercise, which is recommended as a remedy, can be contested also by fair antagonism. Physiologists say after taking calisthenics or after labor there is more uric acid in the blood than at rest; as this is true, muscular exercise would increase metabolism and enhance uric acid formation; though it is understood muscular metabolism results in kreatin, and krea-

tin changes into urea. But we may argue the other side of the case by saying that the preceding is true; yet during the normal metabolic transformation the secretions and excretions are increased, and this process, as it were, would discharge through the excretory organs and expel in that way; another theory is by the oxidation process. The ammonium cyanate when being oxidated forms two compounds, alloxan and urea—thus:

$$\underset{\text{Uric acid.}}{C_5H_4N_4O_3} + O + \underset{\text{Aq.}}{H_2O} = \underset{\text{Alloxan.}}{C_4H_2N_2O} + \underset{\text{Urea.}}{CH_4N_2O}.$$

Alloxan appears to be the intermediate stage of uric acid and urea by the chemical process of oxidation and conversion. This last statement made began as a *theory*—that word was not a misslip. It has been shown, contrary to the general belief, that the nitrogenous or proteid tissues are not used up during hard labor any faster than when at perfect rest; but, on the antithesis, increased muscular exertion is attended by heightened consumption of stored up fat; and, as we well know, by starvation the fats are first used up as fuel also.

Now for the last suggestion to the internal treatment. It seems by the foregoing that no positive remedial process is yet had. The same can be mooted in regard to the much-practiced conservatism prescribed by diet. It is learned from physiology that urea and uric acid are also derived from the ingesta of a large amount of nitrogenous food. This averment is countermanded in Kirk's "Physiology," twelfth edition, page 217, as it says: "A method of getting rid of an excess of nitrogenous matter is provided by the digestive processes in the duodenum, whereby the excess of the albuminous food is capable of being changed before absorption into nitrogenous crystalline matters easily converted into urea, and so, easily excreted by the kidneys, affording one variety of what is called luxus consumption." But this is followed in the same paragraph stating: "But, no doubt, after a time the organs, especially the liver, upon which the extra amount of the ingested diet throws most of the stress, will yield to the strain of the overwork and will not reduce the excess of nitrogenous material brought to it into urea, but into other less oxidized products, such as uric acid." This state of things, however, is delayed for a long time, if not altogether obviated, when large meat-eaters take considerable amount of exercise.

The treatment discussed has been extolled for typical and atypical gout, and also for uric acid diathesis that may affect the mouth. In conjunction with the lesions in the oral cavity, surgical interferences should be instituted likewise here, viz.: the inflammation of the jaw-bone, gums and periosteal membrane; the loose teeth cared for and the accumulation of urates removed. The consideration of this part of the treatment would be so extensive that the previous hints should act only as an index—although all-important as it is, it must be omitted for this time.

Marriage and Tuberculosis.—According to Professor Kirchner, of Berlin, the dangers which attended the marriage of tuberculous persons were dangerous for the patient, for the healthy husband or wife, and for the children. The danger was greater among the poor than among the well-to-do.

THE RATIONAL TREATMENT OF CONSUMPTION.[1]

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THE following brief observations are derived from the comparative study, extending over a period of nearly twenty-four years, of some 10,000 carefully recorded cases, some in private practice, but for the most part in the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor. Many of the patients have been under continuous observation for several years, and others have presented themselves at varying intervals, thus affording opportunity for recognizing changes in the physical signs and verifying progress or the reverse. The general principles of treatment to be discussed are those carried out at that hospital by myself and colleagues, but for the special methods detailed I alone am responsible.

The recognition of the tubercle bacillus as the specific infectious element, and the researches into its natural history, associated for all time with the name of Robert Koch, first permitted the foundation of a rational system of treatment of pulmonary tuberculosis on the basis of a sufficient and determined pathology, and a direction and precision were given to the therapeutics of tuberculosis where previously all had been speculative and empirical. It is impossible to treat pulmonary tuberculosis on scientific lines without having constant regard to its pathogeny, to the sequence of the different stages of its evolution, and to the various circumstances by which they are conditioned, and the careful recognition of the relations of the objective and subjective symptoms to the various and successive pathological processes in which they have their origin and of which they faithfully reflect the progress and intensity, and also to the changes going on in the affected organs. It is from the indications thus derived that a rational treatment must be based. We know for certain that the disease is not only amenable to treatment, but that it is, even in its completed stage, capable also of self-arrest and cure, indeed without the consciousness of the patient. Such a result must necessarily be attributed to changes occurring spontaneously both in the constitutional and local conditions—a return to the *status quo ante*—which are inimical to, and incompatible with, the infective energy, if not indeed with the survival of the tubercle bacillus. To recognize, and if possible to imitate, the methods and to reinforce the influences by which nature accomplishes this result constitute the *rationale* of treatment.

Pulmonary tuberculosis presents itself in two distinct stages: (1) the acute or pyrexial, and (2) the chronic. The former, which precedes the latter, has much the graver significance and is that which makes by far the heaviest demands on our knowledge and therapeutic resources. It usually passes into the second or may return again and again in the course of the latter, indicating a recurrence of destructive activity.

[1] Abstract of a paper read at the International Congress on Tuberculosis at Berlin, May 26, 1899.

ACUTE OR PYREXIAL PHTHISIS.—This is a specifically infective fever. It is not determinate in evolution and does not tend to resolution, but rather to dissolution or to chronicity. This pyrexia is pathologically characteristic and significant. It is from the beginning adynamic in type, reflecting the constitutional asthenia, and therefore all depressants must be avoided in its treatment. The febrile movement is somewhat irregular and composite in character; but two stages can be easily distinguished, sometimes, indeed, alternating and passing gradually into one another. In the earlier or infective stage the thermometric range is pneumonic in type and corresponds to the varying conditions in the lung of irritation, infiltration, and consolidation. It is often accompanied more or less by hæmoptysis. This early pyrexial stage may also present itself as an intercurrent phenomenon. Occasionally the sudden inflammatory extension of an already developed tuberculous area may be thus indicated in the character of expectoration in addition to thermometric record. It is in this acute stage of the disease that the various forms of local counter-irritation are indicated, such as repeated small blisters when there is intercostal tenderness on pressure, and actual cautery when the expectoration is blood-stained or pneumonic in character, and preparation of iodine may also be used externally where large areas of pleural tenderness call for relief. This acute stage may end in complete resolution and there is recovery without material damage to the pulmonary tissues. More frequently (and this is often unrecognized) it passes into the second stage of acute pulmonary tuberculosis which is characterized by an extreme diurnal range of temperature, the maximum being reached almost always in the evening. This has all the characters of septic pyrexia; it is produced by the absorption of the necrotic materials resulting from the toxic effect of the progressing bacillary infection. The febrile movement is essentially one of collapse and reaction, the extent of which is gauged by the extent of the disturbance of thermometric equilibrium. The low morning temperature which is characteristic of this febrile stage is usually accompanied by a feeling of chilliness, especially down the spine, approaching the character of rigors, while the high evening temperature defervesces in profuse colliquative perspiration. It so strongly resembles in these marked features the malarial types of fever, especially the quotidian type, that it even suggests the possibility that it corresponds to, if indeed it is not caused by, the daily maturation and shedding of broods of bacillary spawn or germs. Our knowledge of the embryonic or the pre-bacillary stage of the adult bacilli and their mode of reproduction is still defective. Its further investigation might throw much-needed light on this point. Resolution in this stage is indicated by the restoration of the thermometric equilibrium and by the cessation of the objective symptoms. On the other hand, the process of disintegration may become complete and the third stage, or that of excavation, may be attained. In the light of these considerations it is evident that the fever of tuberculosis calls for our earliest and most potent therapeutic methods, for not only is each pyrexial wave produced at the cost of a corresponding amount of lung tissue, but the already seriously debilitated system is still further devitalized by the attendant sepsis and by the organic demands of the abnormally high temperature.

It is evident from what has been already said that we have to deal with two distinct but related and often intercurrent phases of phthisis—the acute and the chronic—each of which calls for its appropriate treatment. The more we recognize that in tuberculosis we have to deal with a typical form of parasitism the more clearly are the principles of its therapeusis indicated to the physician. It is this mode of regarding the disease that explains the value of those so-called hygienic methods which have, very properly, of recent years been more and more recognized in its treatment. Unfortunately, this appreciation has been carried too far and there is a tendency to neglect or even to exclude completely other not less valuable medical resources at our disposal. To dispense with these therapeutic weapons is like a man combating a relentless enemy with his fists only while potent arms of precision lie neglected at his side.

I have endeavored in the above observations to state the indications and to formulate the principles on which a rational treatment of consumption should be based, and I shall now proceed to consider the therapeutic methods at our disposal under the three heads of (1) hygiene or general treatment; (2) regimen or dietetics; and (3) medical treatment, including the symptomatic and special treatment. We have next to consider how these remedial measures are to be employed in the treatment of the two phases in which the disease is presented.

HYGIENE OR GENERAL TREATMENT.—In acute pulmonary tuberculosis this covers the general management of the case. It concerns the personal conduct of the patient and his immediate environment with its temperature, the amount of exposure to fresh air and sunshine, and the amount of exercise permitted to him, and, lastly, deals with his diet. The principal conditions of this treatment are to be considered under the following heads: (*a*) Rest—absolute repose if possible of body and mind, in the first place. Nothing tends so much, either in health or disease, to disturb the thermometric equilibrium as either emotional or physical disturbances. In extreme cases it may even be necessary to insist upon the continuous maintenance of the horizontal posture—not necessarily in bed—for a considerable length of time. (*b*) Temperature of the air is more important as regards its equability than in relation to its range, which should not be allowed to fall much above or below 55° F. I am more and more inclined to keep up the temperature to the comfort of the patient by additional light coverings, such as ventilated eiderdown bed-quilts, than by raising the temperature of the apartment. If these conditions, with due precautions, can be accomplished in the open air, so much the better. If the patient is confined to a room, the room should be large, well ventilated, and freely exposed to air and sunshine, with the windows and, if possible, the doors open day and night, and with the bed standing well out from the walls. (*c*) Conversation, especially on exciting or depressing topics, should be deprecated; but the patient should be encouraged to occupy his mind outside of himself, so to speak, by the perusal of light and cheerful literature. We should bear in mind the different mental resources of the sick, and that those who are less cultivated, having fewer mental resources to fall back upon, are apt to brood and despond. (*d*) The general bath should, of course, be prohibited, but if possible the whole body should be sponged over night and morning by the nurse with eau-de-cologne or spirits of wine

and hot water, or toilet vinegar. It not only comforts and refreshens greatly, but it has a markedly favorable influence on the temperature.

REGIMEN OR DIETETICS.—Diet, including stimulants, plays a most important part in the treatment of phthisical pyrexia. A large meal of any kind or red meat at any time should not be permitted. Food should be given in small quantities at regular intervals—say, every two hours during the day and every three hours during the night. It should be varied as much as possible, both in materials and cooking, according to individual or national taste. It should consist of fish (shell-fish in the early part of the day), poultry, white game, pigeons, sweetbreads, eggs, light soups, milk and egg puddings, rice, bread-sauce (instead of potatoes), and of vegetables, which should be taken sparingly; but ripe fruits, especially strawberries, may be taken freely, but always early in the day. These materials should be so arranged that the more substantial of them should be given in the form of meals at regular intervals alternately with the lighter forms, which should be taken as refreshments in the intervals. Milk *ad libitum* may alternate or be taken with each more substantial repast if the capacity and taste of the patient permit it. If the digestion is weak, predigested foods or peptonized meat extracts may be given. Stimulants should be used with extreme reserve. If the appetite is poor, and the strength and vitality are low, a tablespoonful of old cognac beaten up with a fresh egg may be given at intervals during the day, according to the demands of the case, or two or three teaspoonfuls of matured whisky in each ration of milk. A glass of dry champagne may be allowed twice a day with a meat meal if the mouth is dry and the appetite is poor. All stimulants should be spread out as much as possible over the day, and given as early as possible before the evening rise of temperature begins. Malt liquors and all red wines are more or less incompatible with a diet into which milk largely enters. They should only be given under very exceptional conditions, such as intolerance of other forms of stimulation, the presence of marked anæmia, or inability to take solid nourishment without them. Lemonade taken with red wines seems to make them lighter, more palatable, and more digestible.

MEDICAL TREATMENT.—This may be distinguished as follows: (1) general—that is, ordinary remedies directed to restore or maintain the general health; (2) sympathetic remedies; and (3) special or specific remedies.

1. *General Remedies.*—Drugs should never be employed in the treatment of disease except under the clearest indications, and this is especially true in phthisis, where the stomach should as much as possible be undisturbed and its powers be reserved for the imperative work of nutrition. It is, however, of the utmost importance that it should be in a condition to discharge its functions efficiently. If the tongue is coated, minute (one-twenty-fourth of a grain) repeated doses of calomel every ten minutes until one-third of a grain has been taken may be given every forenoon, followed by salicylate of soda in ten-grain doses, with tincture of nux vomica and gentian mixture twice or thrice a day; and if there are hepatic complications, with or without constipation, compound tincture of rhubarb may be added in appropriate doses. If this does not succeed, chloride of ammonium in twenty-grain doses may be substituted for the salicylate.

Where the tongue is epitheliated or irritable and there is nausea, preparations of bismuth given in La Bourboule water are the appropriate remedies. If there is anorexia and the tongue is clean, small doses of solution of strychnia, dilute hydrochloric acid, and quinine, with tincture of orange, may be given—the digestive reaction being studied as to whether it is acid or alkaline.

2. Symptomatic Remedies.—Certain symptoms of phthisis, such as hæmoptysis, colliquative perspiration, and cough, are often so serious and violent in themselves, apart from the morbid processes of whose nature and intensity they are the result and measure, that unless controlled they not only interfere with the comfort of the patient and the tendency to resolution, but, especially in the case of hæmoptysis, often prove rapidly and suddenly fatal. The only symptom which I shall permit myself to speak of in this connection is that of cough, which is often so distressing and so injurious. To a certain extent this is physiological—nature's method of expelling the products of diseased action from the lungs. One of the best and simplest ways to enable it to discharge the function efficiently and with a minimum of disturbance is to use the respirator-inhaler which I introduced in 1876, and which I have continued to use up to the present. Charged with a few drops of mixture of chloroform as one part and of guaiacol as three parts, inspired as deeply as possible through the mouth and respired through the nose, and used as continuously as can be tolerated, it is most efficacious in facilitating the expectoration and reducing its amount. It accomplishes the former by increasing the depth, energy, and fullness of the act of respiration, and the latter by its direct antiseptic action. In the fœtid expectoration of basic excavations with narrow opening of discharge into the bronchus, and also in bronchiectasis, this method especially recommends itself.

3. Special or Specific Remedies.—Cod-liver oil and malt extracts are simply special foods directed to supplement nutrition, and do not properly figure in this category. Special or specific remedies are, strictly speaking, those which, recognizing the rôle of the specific micro-organism of tuberculosis, are directed to its extinction. Tuberculin is the only one which has yet established any distinct claims to be so considered, and I shall refer to its value subsequently. There are, however, two remedies which have, in recent years, deservedly come into favor in the treatment of phthisis, viz.: creasote and its distillate, guaiacol, and their carbonates. Of these, guaiacol is the one which I have employed almost exclusively for some years. I have already published my reasons for this preference, and described my experience with this remedy used hypodermically in acute pulmonary tuberculosis. In my hands it has given better and more certain results than any other remedy which I have employed in reducing temperature, and that without any violent perspiration or reaction of any kind. This result I insure by giving five minims of solution of strychnia combined in each dose, with from five to fifteen minims or more of pure guaiacol. I have the temperature taken at intervals, according to the intensity of the fever, of from three to six hours, and give the injection daily or even twice a day, if possible, before it begins to rise. If the thermometer registers a subnormal point, I give from five to fifteen grains of sulphate of quinine. This drug is not so much a febrifuge as an anti-

periodic. It is not so potent—indeed, it is often contra-indicated—during the hot stage of malarial fever; but it is most efficacious in the intervals in anticipating the return of the febrile stage. In acute phthisis it seems to prevent or moderate the reactionary rise of temperature from the minimum. Guaiacol, given hypodermically in this manner, is by far the most certain antipyretic with which I am acquainted. I cannot understand how, in the treatment of acute tuberculosis, the administration of guaiacol, and, still more, of that most repugnant and otherwise therapeutically objectionable drug, creasote, by the mouth should be so persisted in, when it so frequently irritates the mucous membrane and disturbs the functions of the stomach and bowels, and again when such large doses are necessary to produce any effect. When the hypodermic method has reduced the pyrexia, I suspend it for a time or permanently, and substitute from five to ten minims of guaiacol, sometimes adding, when markedly strumous indications are present, from five to fifteen minims of tincture of iodine in cod-liver oil three times a day; or, where that combination is not tolerated, I give the guaiacol either alone or with pure iodine in capsules. When, as occasionally happens, the temperature does not quickly respond to guaiacol injections alone, I give simultaneously, each time that the thermometer registers above normal, fifteen grains of salicylate of soda combined with five grains of antifebrin or phenacetin, or ten grains of antipyrin. If there is cyanosis and the pulse otherwise indicates cardiac debility, I add five grains of citrate of caffein. These combinations are best administered in cachets. I have seen great help obtained in cases of high pyrexia with great debility, by a diet almost entirely composed of milk with three drachms of whisky being given every two or three hours regularly for some days. It is not upon the temperature alone that guaiacol acts so efficaciously when it is used in this manner. It seems, also, to act directly and powerfully upon the pulmonary lesion itself, especially in reducing the expectoration and with it the cough, and in most cases it influences very favorably the general condition, patients declaring that "they feel better in themselves." I use guaiacol hypodermically, also, in nearly all chronic cases when the destruction of lung is extensive and the amount of expectoration is large and does not lessen where the guaiacol has been given internally. I have found the carbonate of guaiacol very useful in cases complicated by diarrhœa and other irritable conditions of the bowels. The curative action of guaiacol applied locally in external tuberculous lesions, such as ulcerations in both skin and mucous membrane, is remarkable; and in such cases, of course, is less a matter of inference than of fact. Sir Philip Smyly, the distinguished Dublin physician, who first used guaiacol hypodermically at my instance, has on several occasions written to me describing his great success with this method of using guaiacol in cases both of surgical and of medical tuberculosis.

I may here refer to the endeavor to overcome such an acute and rapidly destructive phase of disease by what may appropriately be termed the expectant treatment, as carried out more or less completely at some of the sanatoria for tuberculous patients where it is professed that hygienic measures are alone employed. Such an exclusive method is to be deprecated in the strongest terms. It is a distinctly retrograde step in therapeutics. To keep the patient in the acute stage of tuberculosis continually in

bed for many months, waiting for the pyrexia to subside and trusting alone to rest, fresh air, and a general diet urged to more than repletion three or more times a day is unscientific, extravagant, and wasteful. It is, besides, totally unnecessary and inflicts an amount of mental and bodily suffering on the unfortunate patient which only those can realize who have passed through the ordeal.

CHRONIC PULMONARY TUBERCULOSIS.—The treatment of this phase of the disease need not detain us long. When the thermometric record has settled permanently at normal the acute stage has passed and we have now to deal with the chronic stage of the disease. The special remedies which have hitherto been employed to supplement or reinforce the hygienic means in the accomplishment of this result are no longer necessary. The treatment now indicated is mainly disciplinary and dietetic, and the environment now takes a more important part in the process of convalescence. The tendency of the arrested morbid process is towards repair and recovery, and now purely hygienic treatment assumes its proper rôle. To be efficacious this must be carried out systematically and in properly located and appropriately constructed sanatoria under efficient medical control and be carefully adapted to the idiosyncrasies and personal requirements of each patient individually. The great importance of this general hygienic treatment or—as it has been more correctly called—physical and dietetic treatment has met with tardy appreciation by the profession. Although the importance of general hygienic methods have long been recognized, their full value has only been demonstrated in hospitals or sanatoria where they have been systematically carried out under proper conditions. The hospital with which I have been so long connected was originally constructed and its site was chosen with the purpose of making hygienic methods a leading feature of treatment. Designed on the pavilion principle, each addition to the series has been constructed so as to meet the conditions which the successive advances in our knowledge have demanded. The time at my disposal on this occasion will not permit of my describing the several details, but reference to the general views in water-color, the ground plans, the elevations, and the photographs exhibited on the walls of the *foyer* of this splendid building (the Reichstag) will at once give a sufficiently clear and full idea of their object and extent. It is only necessary, in addition, to refer to the steam-driven mechanism which works in connection with the natural ventilation. By means of this system, which does not supplant, but only supplements, a constant extraction of used air is accomplished at a minimum rate of 5000 cubic feet per hour per patient from every room when in occupation. The patients spend as much of their time as is possible in the open air under suitable shelter or in appropriate exercise. The windows of sitting-rooms and bedrooms are kept open night and day. The bedrooms all face the south, and they open on broad verandas by large French windows. Each bed has its head to the wall and is placed between the windows, and the opposite door is louvered or swiveled to permit of free circulation of air and opens onto a large, airy corridor which is thoroughly lighted. There is no heating apparatus in the bedrooms, which are warmed from the corridors with fresh air drawn directly from the outside over steam-heated coils. We have latterly adopted 55° F. as our standard indoor temperature.

The rational therapeutic system carried out at Ventnor may be thus summarized: 1. The diet, into which milk largely enters, is ample, simple, and yet varied, and is adapted to the general condition of the patient and the stage of the disease. It is arranged into convalescent, special, and pyrexial varieties, but in every detail is modified according to the exigencies of each case. 2. Rest and exercise are carried out on the principles generally recognized. 3. The freest exposure to the open air of all the patients which is possible, pyrexial patients being carried on their beds or couches onto the veranda on which their rooms open, and the supplementing of the natural ventilation of the rooms by mechanical means while in occupation. 4. The scientific treatment of symptoms by remedies directed as much as possible to the diseased processes within the body in which they originate. 5. The reinforcement of the purely medical supervision of the patients by a body of specially trained nurses. 6. The appreciation at their true value of the accessory conditions of climate, site, elevation, shelter or exposure, rainfall, sunshine, and nature, and the relations of soil to water. Did time permit, I should like to compare in detail as regards time, cost, and results the rational system of treatment carried out by me at Ventnor, such as I have sketched, with the purely hygienic or expectant treatment, as I have termed it, which has attained its extreme development at Nordrach, but I have already done so elsewhere.

I have already referred to the claim of Koch's tuberculin to be the only specific remedy in tuberculosis, and here in Berlin itself I do not hesitate to state my belief that the reaction of professional opinion against Koch's tuberculin is as unwarranted as its too sanguine and hasty announcement was unwise. In the cases in which I have carried out this treatment it has given most satisfactory and encouraging results. The ten cases treated in the hospital at Ventnor were examined by Sir Hermann Weber and other eminent specialists. I attribute my success to the circumstance that I regarded the tuberculin as a highly concentrated antitoxin, and diluted it sufficiently to give doses small enough to avoid the excessive reactions which I recognized as essentially destructive in character. I confidently believe that if a perfectly pure tuberculin of equal strength and in sufficiently diluted form could be supplied, and used with the precaution which I have just indicated, the results would go far to justify the original anticipations of its success.

A Strychnine-like Alkaloid Obtained from a Corpse (Mecke and Wimmer, *Pharm. Zeit.*, xliii., 300, 301, through *Chem. Soc. Journ.*, April, 1899, 311).—The alkaloid obtained forms white nodular crystals, its hydrochloride feathery tufts. It reacts like strychnine with picric acid, potassium dichromate, sulphuric and nitric acids, tannin, potassium ferri cyanide, potassium thiocyanate, and after evaporating with chlorine-water it gives a dirty green with ammonia. With Fröhde's reagent it yields first a dirty violet, then an olive, and finally a green color; with sulphuric acid a yellow, which changes to cherry-red, and then to rose; with Erdmann's reagent, a yellow color. It is only slightly bitter to the taste, and has no physiological action on frogs.

RAPID TREATMENT OF VARICOSE ULCERS OF THE LEG.

By WM. D. H. BROWN, M. D., of Chicago,

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MY OBJECT in writing this paper is to call attention to the good and rapid effect of this method of treatment in chronic ulcers. There are few of us in practice who do not, now and then, come across intractable varicose ulcers, and the question now among many is: How far is it right to heal up an old chronic sore of this kind? This question has not yet been decided by many of the older surgeons, who claim they have met cases of apoplexy or other alarming symptoms supervening the healing of the sore; but modern surgeons are disposed to look upon the practice as beneficial that removes any conditions, either local or general, and gets down to its first cause. The proper diet, abstemious living and the use of salines will soon obviate the effect of checking the wasting discharge: absolute rest, in many cases, seems out of the question, and we must do the best at our disposal if rest cannot be secured.

CASE 1.—Fred A. D., salesman, twenty-five years of age, single.

Previous History.—Quite a smoker; has never used alcohol to excess; beer once, twice or three times daily; coffee quite freely.

Family History.—Scrofulous diathesis, mother suffered from severe eczema; father died of peritonitis following a severe attack of dyspepsia.

With this patient it was impossible to rest. He came to me with a large sloughing varicose ulcer, about the size of a silver dollar, on the anterior surface of the right leg. He had seen several physicians, who had failed to give him any relief. One suggested that ligation of the veins of the leg was the only means of cure; another that there was no other way than that, and he should be laid up quite a while. Still another physician bandaged the leg with cotton bandage, and left him two days in the bandage, tightly put up. In this condition he was referred to me, suffering great pain and the leg quite black from the knee down, the ulcer of a congested, bluish-red color and very angry. I at once suggested to him that he had better rest it; but rest being out of the question, I must do the best I could. First, I noticed the venous system all over the body was in a weakened condition and tried to get at the cause.

Treatment.—December 15th, galvanism first used to change the condition of the sore; resinol and carbolic dressing and moderate diet, especially avoidance of coffee.

January 10th, ulcer somewhat improved, but improvement not satisfactory until I began the use of antinosine and nosophen, when a marked change was perceptible—less oozing, better granulation, less pain. I used antinosine, fifty per cent. solution, instead of the powder, to which it is preferable; then sore was dusted with nosophen powder, nosophen salve, and then, finally, nosophen gauze and elastic stocking applied.

February 15th, sore had become one-half its original size; healthy granulating edges.

March 15th, sore smaller in size than a ten-cent piece.

March 30th, sore almost completely healed up.

April 10th, completely closed over; patient had no further trouble, and has not since.

CASE 2.—Mrs. N., boarding-house keeper, age fifty, widow, came under my treatment for varicose ulcer October 5th.

Family History.—Good, but mother suffered some from varicose veins after first child was born.

Previous History.—Had worked hard to keep things going for a drunken husband and support a family of children; began to realize she was too much on her feet; was overtired all the time, when veins began to swell and pain her constantly; finally the skin broke and an ulcer of an eczematous character appeared. Leg was hot, painful, red and hard, with hard crusts around the sore.

Treatment.—October 5th, first tried zinc preparations, ichthyol and bismuth, with dressing of carbolated gauze.

October 10th, no improvement perceptible.

November 20th, some slight improvement.

December 1st, improvement slow, not satisfactory; gave up all former remedies and commenced antinosine and nosophen, when decided improvement was noticeable—less pain, less oozing, sore looks healthy, granulating rapidly.

January 10th, sore about healed, kept on until perfectly healed; no drawbacks.

CASE 3.—Mrs. B., aged fifty-two, widow, began treatment August 1st.

Family History.—Fairly good.

Previous History.—Mother of eleven children, several in succession, when varicose veins showed very markedly during last confinement, followed by pain, heat and redness, finally leading to a large ulcer.

Present History.—Varicose ulcer of left leg and ankle for past two years. Various remedies had been used and some improvement, but never came near healing. Got bad again when she came under my care, and veins of leg were much dilated. Ulcer was the size of a silver dollar and very deep, oozing considerably, and painful.

Treatment.—Used galvanism, antinosine and nosophen; first dusted on the antinosine, but, as in the first case, found it preferable in strong solution. Improvement shown the first week. Sore much soothed, lessening of redness and pain. Improvement continued for some time very satisfactory; more rapid when elastic stocking was used after the dressing. Improvement continued until sore was entirely healed. Has remained in good condition since.

CASE 4.—Charles L., clerk, aged forty, commenced treatment September 15th; moderate smoker, and drank very little.

Family History.—Fairly good; some appearance of scrofula.

Previous History.—Complained of pain and very tired feeling in limbs; some constipation and indigestion. Right limb gradually got more painful, until ten months ago an abrasion appeared, spreading until it was the size of a silver dollar.

Examination revealed a deep, defined ulcer of the leg, with irregular contour, greenish base, bad odor, very painful in walking about.

October 1st, showed no signs of ulcer improving under treatment, but considerable pain on putting down the leg, so that one month of continuous rest had to be enjoined.

Treatment.—Began the use of galvanism, antinosine and nosophen.

November 1st, sore much improved; odor hardly perceptible: of a more normal hue, and considerably filled in with healthy granulation; lessened in size and less oozing.

December 1st, sore about the size of a quarter of a dollar and almost filled up; appearance very healthy.

January 1st, almost healed; size about that of a dime.

February 10th, entirely healed.

The records of the foregoing cases suffice to show the cases were of long standing and all of different ages; and the noteworthy fact is that no remedies used seemed to show the continuous and rapid improvement following antinosine and nosophen, though so many remedies had been used.

Such cases always get discouraged at the slow improvement in their condition; and more than that, before the use of antinosine and nosophen, not only remaining in "*statu quo*," but sometimes a relapse into the former condition.

In all the varicose cases the stocking was found of great assistance. Strapping with plaster, as I have seen in cases, is not only of no benefit, but rather otherwise.

With several cases on hand, two especially, it was surprising to note the rapid improvement, even though complete rest was out of the question.

In all the cases the remedies, antinosine and nosophen, were submitted to a crucial test and found anything but wanting, supplying the bill in every case.

I also found in all cases that the solution of antinosine produced the best results, following after with powdered nosophen and nosophen gauze, and, if sore got too dry and hard, nosophen made into a salve was applied. Found no toxic effect whatever and perfect freedom from irritation; effect rather quite soothing, acting as a good sedative.

So that properties of both agents are just what is required for such chronic ulcers, and are possessed by few, if any, that are found in the whole realm of materia medica.

Callous Ulcers.—In the treatment of callous ulcers, a blister applied over the thickened tissues around the ulcer is one of the most rapid methods by which the disappearance of the exuded materials can be brought about.—DR. C. W. CHEYNE.

HISTORICAL SKETCH.

SCHOLASTICS AND MYSTICS.

By James Moores Ball, M. D., of St. Louis.

[continued from may issue.]

Paracelsus, 1493-1541.

No character in medical history produced more strife during his lifetime or more controversy after his death than Paracelsus. His admirers speak of him as the "Reformer of Medicine," while others regard him as the greatest quack of all the ages. Historians, philosophers, biographers and poets have attempted to portray his character, and have left the reader in doubt as to the status of this celebrated individual. To appreciate his worth it is necessary to view him through sixteenth century lenses. Van Helmont spoke of him as "the forerunner of true medicine, God-sent and armed with knowledge to decompose bodies by fire, and his excellent cures put all Germany into commotion." On the other hand, Timmermann said of him: "He lived like a hog, looked like a carter, found his chief pleasure in the society of the lowest and most debauched of the rabble, was drunk the greatest part of his life, and seemed to have composed all he wrote in this condition."

In the latter part of the fifteenth century a certain physician by the name of Wilhelm Bombast von Hohenheim lived in the village of Einsiedeln near Zürich in Switzerland. He was descended from an old and celebrated family.[1] He married the lady superintendent of the hospital attached to the convent in the village. From this union there came the child who was to become the famous Paracelsus. The name given to the child was this: Phillipus Aureolus Theophrastus Paracelsus Bombastus von Hohenheim. The father of Paracelsus in 1502 removed to Villach, in Carinthia, where he died in 1534. Long before this event his son had set the medical world awry. Young Paracelsus studied in the university of Basel, but soon gave up the university to learn from the celebrated alchemists, John Trithemius and Sigismond Fugger. About this time Paracelsus became a traveler and visited the greater portion of Europe, stopping at each great university and receiving his medical degree from one of them. On these journeys he visited Spain, Portugal, Prussia, Poland, Transylvania, Hungary, Denmark, Sweden, Russia, and Turkey. It must not be supposed that Paracelsus passed all of his time lounging about the universities. Far from it. He delighted to learn from the common people, and listened to the tales of old women, Jews, gypsies, tramps, and shepherds. From them he learned many of nature's secrets unknown to the university professors. From these wanderings Paracelsus came to look with disdain upon the teachings of the regular authorities, and regarded books with contempt. "Reading," said he, "never made a doctor, but practice is what forms a physician. For all reading is a

[1] Locher: Theophrastus Paracelsus Bombastus von Hohenheim der Luther der Medicin, p. 17. Zürich, 1851.

footstool to practice, and a mere feather broom. He who meditates discovers something." Often Paracelsus was seen in the company of the rabble, drinking with them and singing their songs. Habits of dissipation grew on him, but this was an age of drunkenness and debauchery. After an absence of ten years, at the age of thirty-two, Paracelsus suddenly appeared in Germany and astonished the whole land with his remarkable cures. No man ever had more eminent personages for patients. Paracelsus in his thirty-third year could boast of having cured thirteen princes

ALTERIVS NON SIT, QVI SVVS ESSE POTEST.
OMNE DONVM PERFECTVM A DEO, IMPERF. A DIABO
LAVS DEO, PAX VIVIS, REQVIES ÆTERNA SEPVLTIS.
AVREOLVS PHILIPPVS THEOPHRASTVS

Paracelsus.

whose cases had been given over by the Galenic doctors of the time. He cured Froeben, the great printer of Basel, of the gout by using laudanum. Erasmus, having consulted the great physician, wrote him, saying: "There is nothing inappropriate in wishing mental happiness to the physician by whom the Lord restores us to bodily health. I am surprised at your knowing my case so well after having seen me only once." In the same letter the theologian speaks of his friend the publisher: "You recalled Frobenius from the shades of death." Œcolampadius, one of the enthusiastic leaders of the Reformation, believed in Paracelsus and caused him to be appointed professor of physic and surgery in the University of Basel in the year 1527.

Basel, at this time, was not an ordinary town. The founding of the university in 1460 and the admission of the city into the Swiss Confederacy in 1501, combined with the freedom from persecution which reformers here enjoyed, led to the upbuilding of a society which was learned and cultured. Here Erasmus and Œcolampadius were living, and here came Paracelsus to try to cause in medicine as great a revolution as the reformers had made in matters of religion. Here, on the fifth of June, in 1527, Paracelsus announced by a short Latin program that he intended to elucidate his own writings on medicine, surgery and physic, and to lecture on the cure of disease without regard to the views of accepted authors. To the astonishment of the medical profession, Paracelsus delivered his lectures in the German language. This unheard-of innovation caused the greatest sensation. It was surpassed, however, when the lecturer publicly burned the books of Galen and Avicenna, saying that they did not contain as much knowledge as his shoe latchets! "A physician," said Paracelsus, "must be a traveler. Diseases wander hither and thither, world-wide, and remain not stationary at one place. If a man wishes to learn much of disease, let him travel far; if he do so, he will acquire great experience. Countries are the leaves of Nature's code of law, patients the only books of the true physician. Reading never made a physician—only practice."

A wonderful spectacle was this. For centuries the world had worshipped blindly at the shrines of Galen, Ætius, Oribasius, Rhazes, Avicenna, and Averroës. "Away with them!" cried Paracelsus. The empty benches of the university of Basel were soon crowded with anxious listeners. The pall had long been lifted from literature, and now science was to be uncovered. It was a courageous act for the reformer to pit himself against the whole profession of his time. Destroying the sacred books of medicine, he declared that these have been blind guides, and bade his hearers follow him to the land of truth. Though every man's hand be against him, he will not fail to lead them.

However, the priests and doctors succeeded in driving Paracelsus from Basel. The medical profession was not looking for reformers.

During his stay in Basel, Paracelsus was often inebriated. Indeed, his secretary, Oporinus, states that for two years the reformer was drunk every day, never undressed himself, and went to bed with his famous sword by his side, which he would often draw and flourish to the great alarm of the secretary. The sword became an attribute of Paracelsus and was mentioned by Hudibras:

"Bombastes kept a devil's bird,
Shut in the pummel of his sword,
That taught him all the cunning pranks
Of past and future mountebanks."

Expelled from Basel, Paracelsus again became a wanderer. The last days of his life were passed in a cell in a hospital in Salzburg where he died in 1541. His epitaph states: "Here lies Phillippus Paracelsus, the famous doctor of medicine, who, by his wonderful art, cured bad wounds, lepra, gout, dropsy, and other incurable diseases, and, to his own honor,

divided his possessions among the poor." Recent investigations show that he was murdered at the instigation of jealous rivals.

Unfortunately for Paracelsus, his claims as a reformer rest on sand. A master of invective, he abused the Galenic doctors and tried to supplant their doctrines with his own crazy notions. Here is his abuse of Galen: "He cannot boast of a single experiment, but learnt everything from others. He opposes nature in all, and is, therefore, a liar who can do nothing but collect pearls and turn them into pebbles; wherefore he is in the lowest hell, whither his disciples will follow him." This of the great Galen who, although making many blunders, had given the medical world many of its greatest truths! Bombastes respected only Apollo, Machaon, and Hippocrates among the ancients. His conception of "true and divine medicine" rests upon four "pillars" which are as firm as a rock. These pillars are: philosophy, astronomy, alchemy, and virtue of the physician. Of the first he said: "Philosophy is the gate of medicine, and they who go not in thereat climb in by the roof and become thieves and murderers." It was not the philosophy of Aristotle that Paracelsus had in mind, but the whole circle of physical, and particularly magical, sciences. His "anatomy" was not the dissection of bodies which is done by "Italian jugglers," but "the anatomy of the essence"—an imaginary analysis of man into mystical ingredients, salt, sulphur and mercury. His "anatomy" reads like the ravings of a madman. Thus he describes the eyes and divides the consideration of their anatomy into the *substance*, the *material*, and the *form*, of which the substance is from without, the material from within, and the form in both:

"1. SUBSTANTIA.—The eyes are twins; that is, two fruits, or products, joined in the form of a cross, with reference to a center, in order that they may have, as nearly as may be, the same integral composition. They are united in the middle, and thence look downward with the stem, and upward with the root. These trunks give off no branches, but only fruit; that is, they produce a blossom which is the material, and bear fruit which is the sight. The flower is white, the fruit is purple, and each of them has a bark, which forms the tunics. The wood is what intervenes between the tunics and the root. In the pith is situated the sight; that is, the substance of the eye.

"2. MATERIA.—The material consists of three things: namely, sulphur, salt, and mercury." (According to Paracelsus, these three were the ingredients of every thing.) "Sulphur is the flower and fruit, in all colors, according to the mode of resolution, outside the visual body. The visual body is Mercurius, in which is contained the perfected sight, without any other material. Salt is the solidification of both, since it reduces the parts into one form; that is, it completes the essence of the visual body,

"3. FORMA.—The form is that of a cross, because the central part bears twins. Afterward, each twin passes into its own form, or rotundity, since the eyes in the body fill the place of the sun, as in a microcosm."[1]

Astronomy is the second pillar of Paracelsian medicine. "No one can be a good physician who is not skilled in astronomy."

Alchemy is the third pillar. "Without a perfect knowledge of alchemy, the physician will use all the resources of his art in vain." The great use of alchemy in medicine is to separate the quintessences of drugs.

[1] Dalton: Galen and Paracelsus, p. 23. New York, 1873.

"Take it not amiss," he said, "that the alchemy I teach yields neither gold nor silver; but look upon it as the key which opens the arcana of medicine to you." "What is alchemy? A preparer of medicines, a purifier of medicines, giving them perfect and entire, so that the physician may fully accomplish his art." "The third pillar of medicine is alchemy; not that alchemy which makes gold and silver (for these blockheads swarm in all countries), but the alchemy which instructs us how to separate each mysterium into its own reservaculum."

Virtue of the physician is the fourth pillar, for only the virtuous are permitted to understand the innermost secrets of man and nature.

Paracelsus viewed man as a microcosm: "There is nothing in heaven or earth which is not in man; and God, who is in heaven, is also in man." Disease is caused by the action of various constituents of the universe upon man. He mentions five "Beings" (Entia) which cause all diseases, and each of these can cause any disease. "When a physician, therefore, finds himself in the presence of a paralytic he must, before all things, discover which 'Ens' has produced the paralysis." The Entia are: Ens Astrorum (influence of the stars); Ens Veneni (poison); Ens Naturale (disturbances arising within the body); Ens Spirituale (spiritual agencies); and Ens Dei (direct action of God who sends diseases as punishments). The first four Entia affect only Turks, Saracens, and other infidels.

There is much more to the so-called "system" of Paracelsus. Disease is caused by changes in the three mystic elements—salt, sulphur, and mercury. In health these are so mingled that they cannot be separated; but when separate, sickness is caused, and if completely separated death results. "What burns is sulphur, what smokes or sublimes is mercury, the ashes are salt." "Distilled 'mercury' produces paralysis, precipitated gout, sublimated mania."[1] I do not consider it necessary to consider the Paracelsian pathology at length. Those who are interested in the subject will probably find that it has neither beginning nor end.

Withington considers that the modern admirers of Paracelsus belong to two classes: "German medical historians, in search of some one to rival the fame of Harvey and the great French and Italian surgeons and anatomists; and theosophists anxious to show what benefits have been bestowed on mankind by the great adepts or Mahatmas. They have raised an imposing monument to their hero on somewhat slight foundations. Does Paracelsus abuse Galen and Avicenna? He is the reformer of medicine! Does he say that air is contained in water? He is the immortal discoverer of hydrogen! Did he call one of his secret nostrums 'laudanum?' 'He bestowed on mankind the inestimable gift of opium!'[2] The historians, indeed, admit that if he wrote all the absurdities attributed to him, he cannot be the reformer of medicine, the German Harvey; and they attempt to show that most of his works are spurious, and written by crack-brained pupils, or even by his enemies to bring him into ridicule. But it is just these works which excite the admiration of our modern mystics. Paracelsus, say they, in his leisure moments, doubtless reformed medicine, discovered hydrogen, and invented laudanum; but it is in what you call absurdities that we recognize the language of the great adept, the friend of the Khan of Tartary, who conversed with esoteric Buddhists on the northern slopes of the Himalaya."

[TO BE CONTINUED.]

[1] Withington: Medical History from the Earliest Times, p. 258. London, 1894. [2] *Ibid.*, p. 259.

NEW YORK LETTER.

The University and Bellevue Hospital Medical College annual commencement exercises were held at the Metropolitan Opera House, May 16th, at which time over one hundred and sixty young men received their degrees of Doctor of Medicine. The address to the graduates was given by Rev. David James Burrill, of the Marble Collegiate Church. He made three points: First, know something; second, don't know everything; third, use what you know. The speaker roundly scored the Christian Scientists. Any one with his eyes open to the pain and suffering on every hand could not question the terrible reality of pain. A man must know something and be sure of it. He must believe something; better be an atheist than an agnostic. It does not make much difference whether a man believes a great deal, but it makes a great deal of difference when he believes something. Always be willing to learn. There are 60,000 doctors in the United States, each one of whom could give "pointers" to each member of the graduating class. The reverend doctor advised the medical profession to learn from the clergy how sweet it was to dwell together in unity. He related the story of a theological professor who told his students that three things were necessary to the success of the clergyman: First, he must have wisdom; that the faculty could give him. Second, he must have grace; that God would give him. Third, he must have common sense, and neither the faculty nor God could give him that; and God Almighty have mercy on him if he didn't have it. The speaker concluded his address by reminding the young men of the responsibilities both to God and man in virtue of their position, and welcomed them as fellow-workers with the clerical profession "each for the other and all for God."

It is worthy of note that Dr. Louis A. Sayre, who has received such recognition abroad, not equaled by any other American, appeared with the faculty on the stage, coming in supported by his son, Reginald. This dear old man will not appear often in public, he now being nearly eighty years of age. It is interesting to note that although so very old he has only celebrated nineteen birthdays. This is accounted for by the fact that he was born on the 29th day of February, 1820.

A Case of Nasal Hydrorrhœa.—At the last meeting of the Laryngological and Rhinological Section of the Academy of Medicine, Dr. W. Freudenthal presented a woman, aged twenty-nine, who has been married eleven years, during which time she has been extremely nervous. For the last five years she has had to sneeze a good deal every morning and immediately after her nose commenced to run. It drops constantly for several hours. The discharge was a watery, sero-mucous one, and a four-ounce bottle was repeatedly filled, taking about two hours to fill it once. It is a case of nasal hydrorrhœa of purely nervous origin. She has also had a gastro-euterorrhœa chronica, and the neurotic element is here the underlying factor. Doctor Freudenthal mentioned the case of a gentleman who suffered greatly from insomnia. He was operated upon by the Asch method for a deviated septum. The operation was done in the afternoon, and at

eleven o'clock he was called to the patient, as his nose was running freely. He sat up bent over a cuspidor and his nose was discharging freely. The next morning the tube was gone and he was in bad condition. When the doctor wanted to collect some of the fluid for examination he stopped discharging, and he never had it again.

Claim of Priority of Case of Laparotomy.—In the *Independent Republican*, published in Goshen, Orange county, New York, appears, under the caption, "A Brief Retrospect—Happenings in Orange County Forty Years Ago this Week," the following: "In the course of an altercation Walter Van Tiser disembowels John Brewster in Goshen. Doctor Thompson replaces the intestines, sews up the wound and starts Brewster on the road to recovery." Under date of May 11, 1899, Dr. John H. Thompson, of Goshen, New York, writes your correspondent as follows: "Along with this letter I mail you a copy of the *Independent Republican* of the 5th inst. I have marked an item of occurrence of forty years ago. Incident to the mention of that occurrence, I make claim of priority of case of laparotomy in my practice. I have to add to the facts mentioned that the patient recovered reasonably quick from the accident, considering that it was before the period of discovery of antiseptics, and when wounds were expected to be attended with greater or less suppuration in the healing process. As an evidence of the fact of the patient's perfect and complete recovery from the lesion in question, I have to state that the negro who was the subject of it was deemed eligible for the military service, and enlisted and served in the 14th R. I. Heavy Artillery in the war of the rebellion. Let me say that the incision sustained was in the lower portion of the abdomen, say six inches in length, permitting the ready escape of the entire intestinal contents of the abdominal cavity. This interesting circumstance is to be noted in connection with this disemboweling: the happening was in the bark mill connected with a tannery, and in the escape of the intestines on the occasion of cutting they became soiled with tan-bark, which fact added, of course, to the gravity of the case." In how far his claim to priority is justifiable, your readers may decide.

Good advice in case of fire was recently published in one of the New York medical journals. Keep in your nursery bedrooms one or two strong sacks about three and a half feet in depth and one and one-half in diameter, held open at the top by a thick wooden hoop, and having a very long, strong rope attached. In case of fire the children may be let down in safety.

New York theater play-bills contain the following notice: "Physicians who have patients to whom they may be called suddenly, and who have heretofore remained away from the theater for fear of being out of call in such cases, can now leave their seat numbers in the box office and be called as quickly as in their office. Ushers will deliver messages promptly to them upon receipt of same over the telephone." Truly a good plan.

David Copperfield contains much that is good; but amongst it is one that appealed to your correspondent, which is as follows: "My advice you know. Annual income, £20; annual expenditure, £19 19s. 6d. Result—

Happiness. Annual income, £20; annual expenditure, £20 and 6d. Result—Misery."

Public Aid to Private Charities.—A comprehensive and carefully prepared statement of the appropriations made by the city of New York from various funds to the private societies and institutions engaged in charitable and reformatory work has just been presented, and is the first that has been presented for the Greater New York. It only foots up to $3,251,802.84. A neat sum.

The American Climatological Association, under the presidency of Dr. Beverly Robinson, held an interesting meeting lately. On May 11th the Ontario and Western Railroad made up a special train for the members and their friends and carried them to Liberty, New York, about one hundred and twenty miles up into the Adirondacks, to Loomis' sanatorium, where we were entertained in a most satisfactory manner. The dinner was a howling success, especially to some. The champagne left on the table made tears come to many eyes. The trip was one that will be held in kind remembrance by all who attended for many years to come. The sanatorium is situated two miles west of Liberty, on hills overlooking forty miles of landscape. During the past year two hundred and four patients have been admitted, and there have been but four deaths, which is most hopeful and encouraging.

The first gastrotomy ever performed on a horse was recently done by a veterinary surgeon in East New York. The stomach was opened in order to effect the removal of a silver watch and some coins which had accidentally fallen from a stableman's pocket into the animal's manger, and were swallowed with its fodder. The operation was entirely successful, and it was recorded that the watch continued to go for one hour after being swallowed.

E. FRANKLIN SMITH, M. D.

New Labels and Methods in Vocation.—In the late Tuberculosis Congress it was stated that infected cattle and swine have only a localized form of the germs of tuberculosis. In these animals have the habit of congregating only in certain parts of the body—in a lymphatic of the hog. Likewise the germs in cattle are localized. Again, according to Virchow, the tuberculin test for infected cattle is almost infallible. Hence, that butcher who will announce that he slaughters hogs by removing affected gland and that he has applied tuberculin test and found no tuberculosis in cattle, can easily command the trade.

MEDICAL NOTES.

The Tuberculosis Problem in the United States.—This problem is dealt with by Dr. S. A. Knopf in a recent number of the *North American Review*. That the problem is one which urgently calls for solution is evident from his estimate that of the seventy million people now living in the United States, ten million will die of tuberculosis unless something is done to prevent such a consummation. He states that one of the best American authorities on the subject, Dr. F. W. Smith, of the Tuberculosis Committee of the State Board of Health of New York, has expressed the opinion that the first great step towards the prevention of tuberculosis in man should be to stamp out the disease in cattle. Many of the most distinguished American physicians and sanitarians who have studied the question hold the same belief. But the suppression of tuberculosis in cattle is still a "far cry" in the United States, as appears from the following facts, which we give on the authority of Dr. Knopf: There are fourteen States which have laws and regulations with regard to cattle, and in which circulars are issued for public instruction in regard to tuberculosis in man. These are California, Colorado, Connecticut, Iowa, Maine, Massachusetts, Michigan, New Jersey, New Hampshire, New York, Pennsylvania, Rhode Island, Virginia, and Wisconsin. There are two, to-wit, Minnesota and South Dakota, where there are bovine laws, but where apparently nothing is done to stop the spread of tuberculosis in man. One (Tennessee) which has bovine laws which it cannot enforce for want of funds, and where, so far, the board has only issued circulars on the prevention of tuberculosis in man and beast; two (the District of Columbia and Oklahoma Territory) which have a law prohibiting the sale of tuberculous milk, but do nothing else for the prevention of tuberculosis in man or beast; and eight, to-wit, Delaware, Indiana, Kentucky, Louisiana, New Mexico Territory, Ohio, Texas, and West Virginia, which issue circulars concerning tuberculosis in man, but do nothing in regard to beasts. There are nine States, namely, Alabama, Arkansas, Illinois, Kansas, Maryland, Mississippi, North Carolina, North Dakota, and South Carolina, where nothing is done for the prevention of tuberculosis. There are seven, namely, Georgia, Idaho, Montana, Nebraska, Oregon, Utah, and Wyoming, which have no board of health. Lastly, five States (Florida, Missouri, Nevada, Vermont, and Washington) deigned no reply to Dr. Knopf's inquiries. To letters addressed to the health officers of forty of the largest cities of the States he received twenty-nine answers; in one-third of these it was stated that nothing at all had been done in the matter of the prophylaxis of tuberculosis. These facts show that as a nation our cousins across the Atlantic are no better protected against tuberculosis than ourselves. Dr. Knopf calls upon the United States government to take into its own hands the task of stopping the spread of tuberculosis through the bovine race. The Board of Health of New York has endeavored to enforce the registration of all tuberculous cases, but the great majority of the medical profession has opposed any attempt in that direction as untimely. The solution of the problem proposed by Dr. Knopf is

that "the whole matter of preventing the spread of tuberculosis must forever be educational work on the one hand and on the other the work of the State and municipal authorities." If any government, he says, is in earnest in its endeavors to combat tuberculosis effectually, besides its regularly enforced laws against tuberculosis in man, through sanitary regulations and public instruction, it must take upon itself the care and treatment of the curable and incurable cases of tuberculosis among the poor and those of limited means.—*Lancet.*

Infantile Tuberculosis.—Lyder Nicolaysen (*Norsk. Mag. for Lægevidensk*, No. 10, October, 1898) finds that out of 4186 children examined 8.3 per cent. were found clinically to be tuberculous. Of 184 tuberculous children treated in the Polyclinic 38.5 per cent. were scrofulous, 25.5 per cent. had osseous and articular tuberculosis, 25.5 per cent. had pulmonary phthisis, 7.6 per cent. peritonitis, and 2 per cent. meningitis. Of 83 tuberculous children treated in the pædiatric service 39.7 per cent. had osseous and articular tuberculosis, 7.7 phthisis pulmonalis, 24 per cent. were scrofulous, 4.7 per cent. suffered from peritonitis, and 3.6 per cent. from meningitis. Nicolaysen concludes that infantile tuberculosis is characterized by a special localization in the glands and by the frequency of osseous and articulur tuberculosis and of cases of meningitis.

To overcome the anæmia so often associated in this class of cases, I have found the solution of bromide of gold and arsenic to be among the most serviceable drugs at our disposal; beginning with five-drop doses in a glass of water after meals and increasing one drop daily until from fifteen to twenty drops are taken. The red blood corpuscles and the percentage of hæmoglobin are rapidly increased with the use of this drug. Occasionally, however, we do find a patient with whom it disagrees, when we must resort to other remedies. The gold solution has also a decided effect on the inflammatory conditions of ovaries. This was pointed out by an author in a European journal ten or twelve years ago, and has been employed during that period by me. Since the introduction of Dr. Barclay's solution, which is a combination with arsenic, it has been used with better effect than the chloride of gold and sodium in pill form. Barclay gave the name arsenauro to his solution for the sake of brevity.—H. J. BOLDT, M. D., of New York.

What Shall be Done with the Consumptive?—One of the most vital questions that has ever been presented for settlement, not only to the medical profession, but to health authorities as well, is: What shall be done with the consumptive? An energetic move is being made in all civilized countries to stamp out this most formidable of all diseases. During the past month an international congress has been held in Berlin to consider this question; but recently a meeting was held in England, over which the Prince of Wales presided, to consider the same question; in France an active part is being taken; and indeed every nation is bending its energy to suppress the disease. In this country some of the State boards of health have succeeded in getting municipal or State aid in the way of enacting laws looking to the eradication of tuberculosis, and much is being

done to educate the common people to the importance of hygienic environment and protection against this awful malady which lays its blighting hand upon one in every fifty persons. All this is very proper and correct; but in the mad effort to protect ourselves we should not forget the poor dejected but innocent victim. It would appear from the tone of many articles written on the subject that to have tuberculosis is a stigma and a crime, and that the culprit must be subjected to all manner of indecencies and cruel treatment. It is proposed that such an unfortunate patient must be ostracized from society, isolated from even his loved ones, and evaded as one who has the leprosy. It is also proposed that whenever it is necessary to move him a special *hospital* car must convey him over the railroads; that contact with him is dangerous, and that he must be forbidden to sit down at the feast. This is all too radical, and by the adoption of many of the suggestions now being made, the very object of them will be thwarted. It will be easy, very easy, to fall from the sublime to the ridiculous in this matter.

Above all things, let common sense prevail where it should do so, and let those in authority be sure they are right before they adopt any foolish suggestions. If this unfortunate class is to be driven from their comfortable homes, away from all those whom they love and depend upon, let an effort at least be made to send them somewhere where a return to health can with some degree of certainty be expected. It has been demonstrated both in Europe and in this country that the hospitalization idea is the correct one for the treatment of the consumptive. Let, then, each State provide an institution specially fitted for the treatment of such cases, and let the government donate reservations where the poor as well as the rich can go for treatment. This foolish idea of sending a patient nearly at death's door with the disease to Colorado, California, or to some sea-port hundreds of miles away, should be stopped. What these people need is the comforts of home in a hospital where they can be properly treated. The plan has been tried, and the result has been that many have been cured and many more benefited. The trouble in the past has been that as soon as a diagnosis was made the patient was sent adrift to take care of himself. Let the consumptive be treated according to modern elucidation in specially erected hospitals, and much will be done to eradicate the disease. It is not necessary, either, that climate should be an absolute necessity, for it is within our power to create most any climate desired in any modern hospital. It is not necessary to drag these patients thousands of miles from their homes, for they can be treated equally as well in a hospital of the kind described wherever erected. Let the medical profession take the interest sufficient to call the attention of all those in authority, and we will soon see a solution to the question, "What shall be done with the consumptive?"—*The Louisville Journal of Surgery and Medicine.*

Tubercle of the Testicle in Childhood.—The *Journal de Clinique et de Thérapeutique Infantiles* of May 4th contains a report of M. Felizet's observations on fifty-eight cases of tubercle of the testicle in childhood. From these it appears that the disease almost invariably attacks this organ in children under seven years of age. As in adults, the epididymis is by far its most usual place of origin, the cord is less often invaded, the pros-

tate, the vesiculæ seminales, and the bladder still less frequently. Hydrocele is rarely present, and the course of the disease, as might be expected in tissues which are virtually embryonic, is often rapid, infection proceeding not only by the spermatic blood vessels, but by the inguino-iliac lymphatics also. M. Felizet is not an uncompromising advocate for castration as a remedy, but is disposed up to a certain point to rely on hygienic and medicinal measures. Even when there is adhesion of the testicle to the scrotum and subsequent abscess formation, he is content to employ local conservative methods. When, however, in addition to suppuration there are present the signs of general impairment of health, he advocates immediate removal of the gland as the only means of preventing a very rapidly fatal form of general tuberculosis. Unfortunately, we are not informed of the results obtained by treatment in these fifty-eight cases. If they should hereafter be forthcoming, they ought materially to aid a decision as to the true indications for castration in the infantile variety of this disease. M. Felizet contends that the condition of rapid tissue development is not favorable to the resistance of an infective process, and in that case the stage of hygienic treatment and local conservative surgery must be a period of watchful care and not be too prolonged. Many authorities consider that in the adult excision of the testicle offers the best hope of cure; and we are still in want of proof to show that the case of children is materially different.

The Treatment of Grip.—I order the patient sponged with alcohol, a mustard plaster placed over the seat of pain in the back, and prescribe the following:

℞ Pulv. ipecac. et opii ..... gr. x
Hydrarg. chlor. mitis ..... gr. iij
Sodii bicarb ..... gr. ij
M. Sig.—Take at bed hour.

Next morning I give a tablespoonful of effervescent sodium phosphate in a glass of water and advise the patient to drink water freely throughout the day. Every two hours he is given phenacetin, grs. v., until five such powders have been taken. His diet is oatmeal, milk, and toast. After the acute symptoms have disappeared, and there is left only a feeling of weakness, anorexia, and lack of ambition, I prescribe a preparation of the alkaloids of cod-liver oil with the malt and hypophosphites. This being slightly bitter stimulates the appetite, and within a week puts the patient in normal condition.—WOOD.

The Cold-Bath Treatment of Typhoid.—I have shown in the cold-bath treatment of typhoid that (1) the case mortality of the disease is reduced by fifty per cent.; (2) that nearly all the distressing symptoms connected with the pyrexial state, and many of those depending on the intestinal lesion, are alleviated to an extent not attainable by any other therapeutic measure; (3) that nutrition is maintained and convalescence greatly accelerated; and (4) that even in cases which terminate fatally, life is prolonged on the average by several days.—DR. F. E. HARE, *British Medical Journal*, December 17th.

SURGICAL SUGGESTIONS.

The Surgery of the Suprarenal Capsule.—Abdominal surgery seems to grow ever bolder, and the great strides which it has made since 1860 do not seem to have brought it to the limits of the resources of science and art. Ovariotomy and hysterectomy have been generalized, and, putting aside the surgery of the gall-bladder, spleen, stomach, and intestines, much has been done of recent years for the surgical relief of tumors of the pancreas, urachus, mesentery, and retroperitoneal connective tissue. Dr. Otto Ramsey, of the Johns Hopkins University, has just published in its Hospital *Bulletin* a monograph on sixty-seven cases of primary malignant tumors of the suprarenal capsule. In only five cases was the tumor removed by operation, and he published three as original, two being under the care of Dr. Howard Kelly, one under Dr. Finney; all three were performed in the Baltimore Hospital. Of the remaining two, one was under Dr. Roberts, of Philadelphia, and ended fatally, and one under Dr. Knowsley Thornton, and recovered. The latter surgeon reports a second case, also successful, which, in Dr. Ramsay's opinion, represents an aberrant suprarenal gland in the substance of the kidney. Of the Baltimore cases, two died; one patient was a woman, aged sixty-four, the other a man more than ten years younger. The tumor in each case was an alveolar sarcoma. In Dr. Howard Kelly's successful case the patient was a woman, aged fifty-three. The abdomen was opened in the median line; the right kidney lay in the front of the tumor; the peritoneum was stripped off, and tumor and kidney removed as in nephrectomy. The vessels gave trouble, as the vein was short and had to be tied very near the vena cava. Before the operation there was slight discoloration of the skin; this was disappearing when the patient was discharged convalescent. All the three Baltimore cases are described in full, and there are two fine drawings of the tumor successfully removed—a fibro-myxosarcoma, five inches broad and over four inches in vertical and antero-posterior measurement. A study of the sixty-seven recorded cases of primary malignant disease of the suprarenal capsule shows that diagnosis is impossible in many, and difficult in all, cases; that the skin changes familiar in Addison's disease are rather the exception than the rule; that the tumor seems more frequent in the male than in women, and that they are extremely malignant. Operation gives the only hope of relief, and has been successful in two out of five operations, though even in these the prognosis is serious from the great frequency with which both glands are involved, and the tendency to early metastases. The principal difficulties in the operation are the friability of the tumor, the great tendency to hemorrhage, and the frequency of adhesions.—*British Medical Journal.*

Surgical Treatment of Cholelithiasis.—Robson in a recent article says that as statistics from various countries and by many observers agree in showing the frequent association of gall-stones and primary cancer of the gall-bladder and liver, it is desirable that cases of cholelithiasis should be submitted to surgical treatment at an earlier stage than has hitherto been the custom.

In all cases of tumor of the gall-bladder, even if unaccompanied by symptoms, an operation should be advised, and the obstruction, usually a calculus, should be removed.

If these rules were followed primary cancer of the gall-bladder and extension to the liver would probably be less frequent.

If early operation in cases of tumor of the gall-bladder were followed out, even if cancer had commenced, it could be caught in an incipient stage, when a cure by cholecystectomy, or even partial hepatectomy, might be reasonably hoped for.

An exploratory operation, even in a patient seriously ill with a localized tumor in the gall-bladder region, is worth advocating, though malignant disease be feared, in the hope that the disease may be inflammatory, and so capable of relief.

If there are any secondary nodules in the liver, or if adjoining viscera are invaded, the operation had better be terminated as a simple exploratory one.

Counter-Irritants.—The forms of counter-irritants now most usually employed are, in order of efficiency, the actual cautery, blisters, and iodina. In former times other methods were used, such as tartar-emetic ointment or croton oil (applied to the skin), the employment of the seton or of the moxa; but nowadays these forms of counter-irritation are, for the most part, discarded, and reliance is placed on the three to which I have referred. Of these, the least efficacious is iodine, which, indeed, unless in superficial inflammations, does not, as a rule, seem to exercise any action. It is a substance which is very commonly employed in chronically enlarged glands in the neck; but beyond diverting the attention of the patient and his friends, it does not seem to possess any real salutary effect.—DR. W. WATSON CHEYNE, *Treves' System of Surgery*, vol. i., page 74.

Deaths After Subcutaneous Injection of Mercury.—Mr. Hutchinson has been informed of a very lamentable result from subcutaneous injection of mercury in syphilis. There is a mixture of metallic mercury with oil, known as Lambkin's solution, of some considerable repute in army practice, and with which no accidents seem previously to have been known. The surgeon who employed it had used it often with good results. On a certain day four soldiers suffering from syphilis were injected with the usual dose, all precautions being observed. Nothing unusual was noticed in the solution (which was freshly made), and when it was subsequently examined, it appeared to have been properly mixed. Ten days later the men were injected for a second time from the same preparation. At varying dates, from ten days to a fortnight after the second injection, all had the most severe salivation. Ulcers formed in the mouth and throat, and there was in three cases very profuse diarrhœa. Under the combined influence of the diarrhœa and stomatitis, two died. Of the two others one is convalescent, and the other still in a somewhat critical state from necrosis of the lower jaw.—*Archives of Surgery*, January, 1899.

Amputations—Indications for.—PRIMARY: 1. Nearly complete avulsion of the limb.

2. All conditions of injury by which the further vitality of the limb is annulled.

3. Injury to the chief nerves and vessels, with comminution of the bone.

4. Great and irreparable destruction of the soft parts.

SECONDARY.—1. Where suppuration, with extensive inflammation of the bone and soft parts is wearing out the patient.

2. Where gangrene has supervened.

3. Where late hemorrhage has come on, which cannot be otherwise stopped.

4. Where septicæmic affections or acute osteomyelitis are supervening.

5. It is recommended also by some on the onset of tetanus.—DR. ANDREW DUNCAN.

Cystitis versus Pyelitis.—In cystitis there is always more pus than in pyelitis, and for this reason kidney epithelium is found more readily in pyelitis because of the smaller amount of pus present. After centrifuging the urine, it should be tested for the amount of albumin it contains. In cystitis it is found absent or present, depending on the amount of pus; whereas, in pyelitis, a considerable quantity of albumin is always found. The explanation for this difference is due to the fact that the kidney is a much more vascular organ than the bladder, therefore exudation takes place more easily. Red blood cells are found more frequently in pyelitis than in cystitis. In pyelitis casts are often found. Clinically, we might succeed in distinguishing these two conditions by washing out the bladder with sterilized water immediately after urination, examine the urine collected, and also the washings for pus. If the water contains a considerable amount of pus, it is probably cystitis.—DR. JOHN A. WESENER.

Broken Neck.—A case of broken neck should be treated:

1. By extension and counter-extension, or by Walton's method of "retro-lateral flexion towards the side towards which the face looks and then rotation back of the normal position," especially if there is any deformity.

Danger of sudden death should be borne in mind according to Dupuytren, though no cases have been reported.

2. This failing to relieve, laminectomy should be done, as offering the only chance to the patient, though it may not be successful more than once in fifty cases.

3. Absence of patellar tendon reflex is not invariably a contra-indication to operation.

4. Fracture-dislocations in the cervical region are far more serious than those occurring elsewhere, but not necessarily hopeless.

5. Operations, if done at all, should be done at the earliest possible moment, before degeneration of the cord takes place.—DR. GEORGE TULLY VAUGHAN, *The National Medical Review*, December.

FORMULAE.

Neurasthenic Headache Associated with Low Vascular Tension.

℞ Caffein citratis ..... gr. v
Sodii bromidi ..... gr. x
Sodii bicarb ..... gr. x
Pulv. acid. tart ..... gr. x

M. Ft. pulv. No. j. Sig.—Take in water while effervescing.

Or:

℞ Caffein salicylatis ..... gr. j
Ammonii salicylatis,
Phenol salicylatis ..... aa gr. v

M. Ft. cap. No. j. Sig.—One capsule every three to four hours.

Or:

℞ Caffein pur ..... gr. ss to jss
Phenacetin ..... gr. v

M. Ft. cap. No. j. Sig.—Take in hot water; repeat in one hour if necessary.

As a Diffusible Stimulant for Neurasthenic Headache, Especially in Women.

℞ Ammonii carb ..... ℥ iij
Tinct. sumbol ..... ℥ vi
Spts. lavandulæ ..... ℥ j
Elix. ammonii valerian ..... ad. ℥ viij

M. Sig.—Two teaspoonfuls every three hours in water.—*Dr. Joseph Collins*, in *Medical News*, February 11th.

Bronchiectasis, with Fetid Expectoration.

℞ Plumbi acetatis ..... gr. 1-6 to ½
Terpin hydrat ..... gr. ij to v
Pulv. opii et ipecac ..... gr. jss to ijss

M. Ft. pil. No. j. Sig.—Three or four pills daily.

Occasionally suspend this and give:

℞ Guaiacol,
Liq. potassii arsenitis ..... aa ℥ ij
Eucalyptol ..... ℥ j

M. Sig.—Ten to twenty drops morning and evening.—*Porcelli.*

For Rigidity of the Perineum.

℞ Chloroformi ..... parts 2
Etheris ..... part 1
Eau-de-cologne ..... part 1

M. Sig.—For external use.—*Southworth.*

Chronic Colitis in Children.

℞ Acid hydrochlorici ..... gtt. v
Aquæ destil ..... ℥ iij
Syr. gum Arabici ..... ℥ vj
Tinct. opii ..... gtt. ij

M. Sig.—One or two teaspoonfuls twice a day.

If it is evident that putrefaction is going on in the intestines:

℞ Benzo-naphthol,
Beta-naphthol ..... aa gr. ij
Bismuth salicylat ..... gr. j
Pulv. gum Arabici ..... gr. v

M. Ft. in pulv. No. j. Sig.—One three times a day to a child of four years. Continue this for four or five days.—*Romme, La Presse Médicale.*

Gout.

℞ Quin. sulph ..... ℥ j
Acid citric ..... ℥ ij
Syrup. simp.
Syr. aurantii flor ..... aa ℥ ij
Aquæ destil ..... ℥ vj

M. Sig.—Ten drops of this mixture in an ounce of water, to which is added twenty grains of bicarbonate of sodium, to be taken while effervescing.—*Klinische Therapeutische Woch.*

Asthma in Pregnancy.

℞ Potassi bromidii ..... ℥ iij
Chloral hydrat ..... ℥ ss
Aquæ ..... ℥ j

M. Sig.—Teaspoonful to be used as required.

Or:

℞ Potassii bromidi ..... ℥ j
Iodini ..... gr. j
Tinct. gentian. comp ..... ℥ j
Aquæ ..... ℥ ij

M. Sig.—Teaspoonful three times a day. —*Henry C. Moir.*

Treatment of Typhoid Fever by Chlorine.

After four years' observation, I am ready to reiterate the conclu-

sions which I presented to you in my former paper, viz.:

(1) That in the treatment of typhoid fever chlorine can be safely administered until disinfection of the alimentary canal is obtained.

(2) Under its use the tongue becomes clearer, the appetite and digestion better, the fever lower, and the stools devoid of odor save that due to chlorine.

(3) The general strength, intellectual processes, and nervous conditions improve.

(4) The disease is shortened in duration and the patient usually proceeds to a rapid and complete recovery.—*Dr. Reynold W. Wilcox*, *Medical News*, February 11th.

An Agreeable Antiseptic Dentifrice.

℞ Salol ..... gr. xlv
Ol. anisi,
Ol. geranii ..... aa *m* viij
Ol. menth. pip. ..... *m* xv
Spiritus ..... ʒ v
M. Sig.—Dentifrice.—*Nogue.*

The Creed of the Spiritual Healer.—According to the *Lancet* for April 29th, the *Critic* publishes some amusing verses on the creed of the spiritual healer. Two members of this sect, says the *Lancet*, which seems to be another name for the Christian Scientist, have informed an interviewer to keep in good health "what you want to do is to think that you can't be ill. Try and (*sic*) remember that the body is nothing." The poet of the *Critic*, after musing on the foolishness that has beset men who for generations have suffered and even died without using so easy a therapeutic measure, sings thus:

. . . . . .
For the body's not at all;
Rich and poor and great and small,
Thin and fat,
Man is nobody; you'll note
There is nothing in his coat
Or his hat.

Should you lose your legs, anon,
Never think of grafting on
Legs of cork;
Don't believe you're even lame,
Put your boots on all the same,
Rise and walk!

. . . . . .

Never work, and ne'er be sad;
Hunger's nothing but a fad;
Feed the mind.
When on nothing you are cloyed,
If you feel a kind of void—
Think you've dined.

A Text-Book of Anatomy. By American Authors: A. D. Bevan, F. H. Gerrish, Wm. Keiller, J. P. McMurrich, G. D. Stewart, and G. Woolsey. Edited by Frederic Henry Gerrish, M. D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Illustrated with 950 engravings in black and colors. Royal octavo, 917 pages. Lea Brothers & Co., Philadelphia and New York. 1899.

This treatise on anatomy is destined to become the most popular work on the subject. It covers the ground completely and satisfactorily. It is superior to Gray, Allen, and others. Not the least important feature is that of the illustrations, many of which are original, while others have been taken from standard German and French works.

The Unconscious Mind. By Alfred T. Schofield, M. D., M. R. C. S. 8vo, cloth, 451 pages, with copious index and diagrams. Price, $2.00, post-paid. Funk & Wagnalls Company, Publishers, 30 Lafayette Place, New York.

The object of the author is to establish the fact of an unconscious mind in man, and to trace in brief some of its powers and the various ways in which they are exhibited. The work seeks to show that this mind is the seat of character and of conscience and spirit-life; the source of conduct, of instinct, of tact, and the thousand qualities that make us what we are; the home of memory, the ultimate governor and ruler of all actions and functions of the body, and in every way a most important factor in our psychical and physical life.

The book is an interesting contribution. The chapters relative to "The Unconscious Mind and Disease" and "The Unconscious Mind and Therapeutics" are particularly interesting to medical men.

A Treatise on Human Physiology for the Use of Students and Practitioners of Medicine. By Henry C. Chapman, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia. New (second) edition thoroughly revised. In one handsome octavo volume of 921 pages, with 595 engravings. Cloth, $4.25, net; leather, $5.25, net. Lea Brothers & Co., Philadelphia and New York.

The first edition of this work is so well known that it is only necessary to say that while the plan and arrangement which have proved so satisfactory remain unchanged, every page shows the revision necessary to represent the present status of its highly developed subject. Especially will these changes be noted in the section on the Nervous System, and wherever necessary to show the great advance recently made in the field of physiological chemistry.

Progressive Medicine, Vol. II. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 472 pages, 56 illustrations and 3 full-page plates. Lea Brothers & Co., Philadelphia & New York.

The second volume of "*Progressive Medicine*" presents carefully prepared and exhaustive papers upon the following subjects:

Surgery of the Abdomen, including Hernia. By William B. Coley, M. D., of New York City.

Gynecology. By John G. Clark, M. D., of Philadelphia.

Diseases of the Blood, Diathetic and Metabolic Disorders, Diseases of the Spleen, Thyroid Gland and Lymphatic System. By Alfred Stengel, M. D., of Philadelphia.

Ophthalmology. By Edward Jackson, M. D., of Denver.

The Diseases of the Nervous System. By DR. LUDWIG HIRT, Professor at the University of Breslau. Translated by AUGUST HOCH, M. D., and FRANK R. SMITH, A. M., M. D., with an Introduction by WILLIAM OSLER, M. D., F. R. C. P., F. R. S. With one hundred and eighty-one illustrations. Octavo, pp. xvi.–715. New York: D. Appleton & Company. 1899.

Hirt's Text-Book is one of the most valuable of the German treatises on neurology. The arrangement of subjects is somewhat novel but satisfactory. To place tabes and dementia paralytica among the diseases of the general nervous system instead of in the sections on diseases of the cord and diseases of the brain, respectively, is a distinct advance.

The book is valuable to the medical student and general practitioner because of its arrangement and its graphic delineation of the anatomy and symptomatology. The illustrations also add much of value and are in marked contrast to those worn-out cuts which we see only too frequently.

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The Therapeutic Uses of Melachol Effervescing Tablets.—Probably no form of medicine is more generally grateful to the sick than that in which the solution of the drug causes the formation of carbon dioxide. There are two reasons for this: First, the gas itself is particularly pleasant to the stomach, allaying a sense of nausea and unrest by its sedative action; second, the gas in a great measure disguises the taste of the medicines by creating a sensation which, in a very marked degree, overpowers the sense of taste, and hence the disgust and nausea experienced by so many persons when taking bitter medicines is entirely prevented.

The stimulant and exhilarating effects of effervescent beverages is the cause of the great popularity of the many refreshing drinks now dispensed from soda fountains; and it is not saying too much to assert that much harm might be done by these same drinks if taken without the carbonic acid gas.

It is a knowledge of these facts which has led pharmacists to produce the large and constantly increasing class of effervescing powders and granular salts.

This, also, has induced the Alta Pharmacal Company to put melachol in the form of effervescing tablets, a form in which the dose may be accurately gauged, and in which the properties of the medicine are maintained for any length of time in any climate.

Regarding these, as well as most other tablets of almost every class, it seems proper to state that it will be found to facilitate their solution to crush or break them before adding the water, as much greater surface is at once exposed to the action of the solvent, and the medicine can be taken while it contains more than the one volume of the gas which the water is capable of dissolving.

The effervescing melachol tablets are particularly useful to travelers, and army surgeons have advised that nothing more desirable could be found for the camp and field.

The therapeutic uses of melachol are so clearly indicated by the formula, as given in the literature of the company, that it is not necessary to repeat it here; but from a clinical report by a competent observer in one of the worst malarial districts of Arkansas, it is found that its use is broadening its range of therapy, several cases of malarial hæmaturia having been successfully treated with this remedy.

The same report also contains an account of its use in a case of the so-called typho-malarial fever, where mercury and malarial antidotes all failed until melachol was given, when the coated tongue cleaned up, the bowels and liver were aroused, and the case went on to a rapid recovery. —*St. Louis Clinique*, May, 1899.

The Uses and Effects of Gude's Manganiferous Iron Peptone.—The employment of iron preparations both in essential anæmia (chlorosis) and in the symptomatic forms of this affection produced by severe losses of blood, dates from the earliest times. Long before the chemical relation

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of this effect was known, these remedies were administered on the ground of pure empirical experience.

When Hannon pointed out the high significance of manganese, as well as of iron, with regard to the absorption of oxygen by the blood, and when this discovery was confirmed by Ruehle, efforts were made to produce, by combination of both remedies, preparations which would best fulfill the therapeutic indications in all directions.

Former attempts of this kind failed to give the desired results. The aim was to combine both metals in such a form as would enable them to be absorbed throughout the entire extent of the alimentary canal, and at the same time be devoid of disagreeable taste which would prevent their prolonged administration. After a series of experiments made in this direction, I found in the preparation discovered by Dr. A. Gude (pepto-mangan—Gude) a remedy which fulfilled the above requisites, and can recommend it most heartily.

Pepto-mangan—Gude is a clear, dark, wine-red fluid, having an agreeable, non-metallic, astringent taste. The latter property gives it a great advantage over other similar preparations, for the remedy is always taken with pleasure, and may therefore be administered for a long time without exciting the disgust of the patient. No irritation of the stomach is produced, nor is the digestion disturbed in the least respect; indeed, as regards the latter, a stimulation of the long-absent appetite could be demonstrated within a short time.

The pepto-mangan—Gude, usually mixed with some water, is prescribed in doses of two or three dessertspoonfuls, increased to as many tablespoonfuls per day. An especially agreeable manner of administration is by addition of cold milk, which then assumes a light chocolate color and an agreeable taste. Prescribed in this form we obtain from this preparation everything that could be expected from a remedy for anæmia. The pepto-mangan—Gude may also be mixed with white and sweet wines, excepting the red wines which contain tannic acid, and an occasional change in the manner of administration is sometimes of advantage, especially in the case of children.

The diet, during the use of this preparation, should consist of milk, meats—especially ham—fowl, soft-boiled eggs, and other easily digested foods. On the other hand, sour and fatty foods, red wines, and raw fruits are to be avoided.

The remedy is to be administered for a number of weeks, especially in cases of chlorosis; but in the case of young girls up to twelve years of age it is best to commence with a daily dose of two teaspoonfuls (ten grammes). In adults the dose of the pepto-mangan—Gude may be increased in a few days to one tablespoonful twice or thrice daily, or even to ten or twenty grammes. The preparation should be well protected from the light, and preserved in a cool place in a well-stoppered bottle.

I have employed the pepto-mangan—Gude with much success both in chlorosis and in cases of anæmia in girls and women due to loss of blood, menorrhagia, metrorrhagia, inflammation of the pelvic organs, peri- and parametritis, or prolonged leucorrhœa. In almost every instance I observed within a short time increase of appetite, improved nutrition, healthier color of the face, and increase of weight. I was surprised to

learn how much more readily the pepto-mangan—Gude was taken than similar preparations, without ill effects even after protracted use.

To illustrate my remarks I will cite a few cases:

I will first report a case of chlorosis treated with this remedy, which was under constant observation. The patient, a school-girl, aged sixteen, began to menstruate one year ago, but after appearing regularly for three periods the flow suddenly ceased, probably in consequence of mental overexertion, and symptoms of chlorosis soon developed. The various preparations of iron were tried, but were either not well borne or excited so much disgust that they were discontinued by the capricious patient. A milk cure was prescribed, but followed for only a short time. When, however, I resorted to the pepto-mangan—Gude I was surprised to find that the girl took it willingly and that it was well borne. She made a rapid recovery, and after the use of two bottles had regained her former healthy color, while her strength and menstruation returned.

CASE 2.—A married lady, aged twenty-four, had acquired—apparently of abortion at a very early period—an intense peri- and parametritis with an exudation of the size of a child's head. The latter disappeared almost completely under suitable treatment and rest, so that only a slight induration was present in the parametrium after three weeks. Owing to the considerable anæmia and loss of appetite, however, the patient recovered very slowly, and for this reason I ordered the pepto-mangan—Gude. A few days after its use the appetite reappeared, recovery ensued rapidly, and five weeks later her health was completely restored.

CASE 3.—A married lady, aged thirty, had suffered from leucorrhœa due to catarrhal inflammation of the vagina for two years, and although the local trouble had been much relieved she continued pale and weak. As her chlorotic daughter at the time was taking the pepto-mangan—Gude with marked benefit, I advised her also to try this preparation. She followed my advice, and after fourteen days the weak, sluggish, and pale woman seemed as if transformed. She has since regained her former health.

These few cases, which were under continued observation, will confirm what has been said above regarding the manner of application and effect of the pepto-mangan—Gude. I regard it as superfluous to cite other cases, since a few closely observed cases teach more than a host of superficial observations.

On the ground of my experience I consider myself warranted in directing the attention of physicians to this remedy, and feel convinced that further trials will give equally favorable results. Even in cases where local treatment is necessary the pepto-mangan—Gude will prove a valuable auxiliary in our treatment.— DR. JULIUS HEITZMANN, Vienna, *Allgemeine Wiener medizinische Zeitung*, xxxvi.

Concerning Silver and the Silver Salts.—The author confirms the results obtained by Credé with the citrate and the lactate of silver, and records his opinion of their decided superiority to other remedies as external disinfectants, on account of the energy and depths of their action and their freedom from irritant and destructive effects. He praises the citrate, more especially because of its slow solubility, the depth and length duration of its action, and its absolute non-poisonousness and non-causticity. He

recounts a few pregnant cases of mastoid operations, severe burns, injuries to joints, and complicated fractures, in which the saturated solution of the citrate of silver and drainage with the citrate of silver gauze rendered him the most excellent service.

In the second part of his paper the author considers the important subject of the soluble metallic silver recently introduced by Credé, and its therapeutic value in septicæmia (blood poisoning). He demonstrates the remarkable physical properties of this soluble metal, and of the preparations made of the argentum colloidale, more especially the silver salve, the unguentum Credé. He shows by means of microscopic illustrations that the argentum colloidale, both in watery solution and in salve form, is a suspension of the very finest molecular particles, and is in a condition most suitable for reception into the capillaries and the tissues.

In conclusion Wolfrom reviews the indications for the use of the silver salve in the various acute and chronic pathological conditions caused by septic infection. He lays stress upon the necessity of beginning the silver treatment of the general system early, before the advent of dangerous secondary symptoms and toxic effects. He is firmly convinced that the soluble silver will influence fresh cases, of septicæmia, as well as chronic ones and furunculosis when no complications are present, most favorably. Often, indeed, it will effect a rapid and most astonishing cure. He therefore most urgently recommends the use of the Credé method in suitable septicæmic cases to his colleagues.—Abstract of a paper read by DR. G. WOLFROM, of Magdeburg-Buckau, before the Magdeburg Medical Society, April 28, 1898.

What is "Husa?"—Some little time ago a cock-and-bull story was told about a plant called "husa," which was said to be a wonderful cure for the opium habit. Prof. John Uri Lloyd, of Cincinnati, has gone pretty thoroughly to the root of this matter, and has investigated a sample of "husa" obtained from the individual exploiting it. It appears to be nothing else than a concoction containing a large quantity of morphine. Any effect it may possess in the treatment of the opium habit apparently results from the "husa" given for administration being a graduated solution of morphine. Professor Lloyd defines "husa" as follows: "A solution of sulphate of morphine to be administered under the name of 'husa' and only by physicians. It is sold to physicians at the rate of $10 for about two hundred and thirty-four grains of morphine. In support of this view I offer the foregoing testimony, and submit herewith the morphine obtained from twenty-five cubic centimeters of each liquid. Until I am furnished with a new plant containing morphine to the extent found in these experiments I shall accept 'husa' as a concoction." It was to be expected that there was a nigger in the fence somewhere, and Professor Lloyd is to be thanked for so carefully exposing the fraud.—*Medical Age.*

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